

## Protein Sequence Searches - February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.
- If you encounter an accession number from an older search run against UniProt (results file extension .rup) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (UniPARC) at:

<http://www.pir.uniprot.org/database/archive.shtml>

If you have any questions regarding this information or your results, please contact any STIC searcher.

**When submitting sequence search results for scanning into IFW, please include a copy of this attachment to assist any future Examiners or members of the public who may encounter UniProt temporary accession numbers.**

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From: Bunner, Bridget  
Sent: Tuesday, February 21, 2006 3:47 PM  
To: STIC-Biotech/ChemLib  
Subject: sequence search

Hi! I'd like to request a sequence search for case 10/620,642:

1. the amino acid sequence of SEQ ID NO: 46
2. the amino acid sequence of SEQ ID NO: 61
3. the amino acid sequence of SEQ ID NO: 63

Thanks!

Bridget Bunner

Art Unit 1647  
Rem 4C65  
(571) 272-0881  
mailbox 4C70

RECEIVED  
FEB 21 2006  
STIC

\*\*\*\*\*

Searcher: \_\_\_\_\_  
Searcher Phone: \_\_\_\_\_  
Date Searcher Picked up: \_\_\_\_\_  
Date completed: \_\_\_\_\_  
Searcher Prep Time: \_\_\_\_\_  
Online Time: \_\_\_\_\_

\*\*\*\*\*

Type of Search  
NA# \_\_\_\_\_ AA# \_\_\_\_\_  
S/L: \_\_\_\_\_ Oligomer: \_\_\_\_\_  
Encode/Transl: \_\_\_\_\_  
Structure #: \_\_\_\_\_ Text: \_\_\_\_\_  
Inventor: \_\_\_\_\_ Litigation: \_\_\_\_\_

\*\*\*\*\*

Vendors and cost where applicable  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
QUESTEL/ORBIT: \_\_\_\_\_  
LEXIS/NEXIS: \_\_\_\_\_  
SEQUENCE SYSTEM: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (Specify): \_\_\_\_\_

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GenCore version 5.1.1.7  
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OM protein - protein search, using sw model

Run on: February 22, 2006, 18:05:41 ; Search time 122.336 Seconds  
(without alignments)  
747.047 Million cell updates/sec

Title: US-10-620-642-46  
Perfect score: 1061  
Sequence: 1 MKQTWILTCIYLQLLPN.....AASSLRNDSNSSNKIYLI 208

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : A\_Geneseq\_21.\*  
1: geneseqp1980s.\*  
2: geneseqp1990s.\*  
3: geneseqp2000s.\*  
4: geneseqp2001s.\*  
5: geneseqp2002s.\*  
6: geneseqp2003as.\*  
7: geneseqp2003bs.\*  
8: geneseqp2004s.\*  
9: geneseqp2005s.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1061	100.0	208	2	Aar83977 Human ste
2	1061	100.0	208	2	Aar95175 Stem cell
3	1061	100.0	208	3	Aay53286 Human ste
4	1061	100.0	208	4	Aab98355 Human ste
5	1061	100.0	208	4	Aau02457 Human SCF
6	1061	100.0	208	4	Aab96940 Human ste
7	1061	100.0	208	4	Aab73565 Human SCF
8	1061	100.0	208	4	Aau02764 Human SCF
9	1061	100.0	208	4	Aau05255 Human ste
10	1061	100.0	208	5	Aae22323 Human ste
11	1061	100.0	208	5	Abg95641 Human SCF
12	1061	100.0	208	7	Ades2474 Human ste
13	1061	100.0	208	8	Adp99316 Human ste
14	1061	100.0	208	8	Adu50646 Human ste
15	1061	100.0	208	9	Adw93091 Human ste
16	1061	100.0	208	9	Adz47543 Human ste
17	1052	99.2	208	2	Aar11710 Human ste
18	1030	97.1	220	9	Adw93154 Human Ste
19	1030	97.1	220	9	Adz47643 Human ste
20	1030	97.1	248	9	Adw93153 Human Ste
21	1030	97.1	248	9	Adz47644 Human Ste
22	1030	97.1	273	2	Aar11711 Human Ste
23	1030	97.1	273	2	Aar20647 Human mas
24	1030	97.1	273	2	Aar83978 Human ste

25	1030	97.1	273	2	AAW27607	Aaw27607 Human rec
26	1030	97.1	273	3	AAy53284	Aay53284 Human SCF
27	1030	97.1	273	4	AAb98356	Aab98356 Human ste
28	1030	97.1	273	4	AAb98367	Aab98367 Human SCF
29	1030	97.1	273	4	AAb98357	Aab98357 Human SCF
30	1030	97.1	273	4	AAU02458	Aau02458 Human SCF
31	1030	97.1	273	4	AAU02460	Aau02460 Human SCF
32	1030	97.1	273	4	AAb96942	Aab96942 Human ste
33	1030	97.1	273	4	AAb96941	Aab96941 Human ste
34	1030	97.1	273	4	AAb96952	Aab96952 Human ste
35	1030	97.1	273	4	AAb73566	Aab73566 Human SCF
36	1030	97.1	273	4	AAb73567	Aab73567 Human SCF
37	1030	97.1	273	4	AAU02766	Aau02766 Human SCF
38	1030	97.1	273	4	AAU02765	Aau02765 Human SCF
39	1030	97.1	273	4	AAU05256	Aau05256 Human ste
40	1030	97.1	273	4	AAU05266	Aau05266 Human SCF
41	1030	97.1	273	5	AAE22324	Aae22324 Human ste
42	1030	97.1	273	5	AAE22326	Aae22326 Human SCF
43	1030	97.1	273	5	ABG95642	Abg95642 Human SCF
44	1030	97.1	273	7	ADE52476	Ades52476 Human ste
45	1030	97.1	273	7	ADE52477	Ades52477 Human ste

ALIGNMENTS

RESULT 1  
AAR83977  
ID AAR83977 standard; protein; 208 AA.  
XX AC AAR83977;  
XX DT 25-MAR-2003 (revised)  
DT 14-MAY-1996 (first entry)  
XX DE Human stem cell factor (SCF).  
XX KW Stem cell factor; progenitor; haematopoiesis; SCF; anaemia;  
KW thrombocytopenia; leucopenia; AIDS; immunodeficiency; bone graft;  
KW transplant; neoplasia; myelosuppression; bone marrow.  
XX OS Homo sapiens.  
XX FH Key Location/Qualifiers  
FT Peptide 1..25  
FT Protein 26..183  
FT /label= sig\_peptide  
FT /label= mat\_peptide  
XX EP676470-A1.  
XX PD 11-OCT-1995.  
XX PF 04-OCT-1990; 95EP-00105391.  
XX PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 28-SEP-1990; 90WO-US005548.  
PR 01-OCT-1990; 90US-00589701.  
XX (AMGE-) AMGEN INC.  
XX PI Zsebo KM, Suggs SV, Bosselman RA, Martin FH;  
XX WPI; 1995-346090/45.  
XX N-PSDB; AAT04889.  
XX PT New stem cell factor polypeptide(s) - for stimulating the growth of  
PT primitive progenitor cells, esp. for treating disorders involving blood  
PT cells.  
XX PS Disclosure; Fig 15C; 127pp; English.

XX AAR93997 is human stem cell factor (SCF). Non-naturally occurring SCF and  
 CC C-terminally truncated polypeptides stimulate growth of primitive  
 CC progenitors such as haematopoietic progenitor cells, neural stem cells  
 CC and primordial germ stem cells. The peptides can be used in a composition  
 CC for treating leucopenia, anaemia or thrombocytopenia, for enhancing  
 CC engraftment of bone marrow during transplantation or for bone marrow  
 CC recovery after chemotherapy or radiation-induced bone marrow aplasia or  
 CC myelosuppression. They can also be used for the treating neoplasia, nerve  
 CC damage, infertility, intestinal damage or myeloproliferative disorders.  
 CC Antibodies may be raised against the peptides for use in detection or  
 CC neutralisation of SCF in serum. SCF may be useful for the treatment of  
 CC AIDS and severe combined immunodeficiency (SCID) states alone or in  
 CC combination with other factors such as IL-7. (Updated on 25-MAR-2003 to  
 CC correct PF field.)  
 XX correct PF field.)  
 SQ Sequence 208 AA;

Query Match 100.0%; Score 1061; DB 2; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYYPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYYPG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 QY 121 KDLKSFSPPEPLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
 DB 121 KDLKSFSPPEPLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
 QY 181 KPFLPPVAASSLRNDSSSNKYYILI 208  
 DB 181 KPFLPPVAASSLRNDSSSNKYYILI 208

RESULT 2  
 AAR95175  
 ID AAR95175 standard; protein; 208 AA.  
 XX  
 AC AAR95175;  
 XX  
 DT 03-OCT-1996 (first entry)  
 XX  
 DE Stem cell factor.  
 XX  
 KW Stem cell factor; SCF; splice variant; embryo implantation;  
 KW in vitro fertilisation; IVF.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT /label= Sig\_peptide  
 FT Protein 26..208  
 FT /label= Mat\_protein  
 XX  
 PN WO9614410-A1.  
 XX  
 PD 17-MAY-1996.  
 XX  
 PF 31-OCT-1995; 95WO-GB002547.  
 XX  
 PR 04-NOV-1994; 94GB-00022293.  
 PR 28-APR-1995; 95GB-00008618.  
 XX  
 PA (ISTF ) ARS APPLIED RES SYST HOLDING NV.  
 XX  
 PI Sharkey AM, Smith SK, Dellow KA;  
 XX

DR WPI; 1996-251760/25.  
 DR N-FSDB; AAT29489.  
 XX  
 PT Stem cell factor comprising C-terminal sequence given in specification -  
 PT useful to ensure correct development of pre-implantation embryos before  
 PT implantation into subject.  
 XX  
 PS Disclosure; Fig 2; 25pp; English.  
 XX  
 CC A DNA sequence (AAT29489) codes for human stem cell factor (SCF)  
 CC (AAR95175). The full-length SCF transcript consists of 8 exons. A novel  
 CC splice variant has been identified that appears to arise from the  
 CC inclusion of a novel exon (see also AAT29489) between exons 3 and 4 of  
 CC the gene. The resulting frameshift produces a novel SCF consisting of the  
 CC first 39 amino acids of mature SCF followed by a 33-amino acid C-terminal  
 CC region (AAR95174). The novel SCF is useful for ensuring correct  
 CC development of pre-implantation embryos  
 XX  
 SQ Sequence 208 AA;

Query Match 100.0%; Score 1061; DB 2; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYYPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYYPG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 QY 121 KDLKSFSPPEPLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
 DB 121 KDLKSFSPPEPLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
 QY 181 KPFLPPVAASSLRNDSSSNKYYILI 208  
 DB 181 KPFLPPVAASSLRNDSSSNKYYILI 208

RESULT 3  
 AAY53286  
 ID AAY53286 standard; protein; 208 AA.  
 XX  
 AC AAY53286;  
 XX  
 DT 27-JUL-2000 (first entry)  
 XX  
 DE Human stem cell factor protein sequence.

XX Stem cell factor; SCF; haematopoietic progenitor cell; blood forming;  
 KW primitive progenitor cell; haematopoietic disorder; syngeneic;  
 KW allogeneic; autologous bone marrow transplant; gene therapy;  
 KW transfection; haematopoietic stem cell; acute blood loss; neoplasia;  
 KW cancer.  
 XX  
 OS Homo sapiens.  
 XX  
 PN EP992579-A1.  
 XX  
 PD 12-APR-2000.  
 XX  
 PF 04-OCT-1990; 99EP-00122861.  
 XX  
 PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 28-SEP-1990; 90WO-US005548.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 04-OCT-1990; 90EP-00310899.  
 XX  
 PA (AMGE-) AMGEN INC.

XX Zsebo KM, Suggs SV, Bosselmann RA, Martin FH;  
 PI WPI; 2000-259135/23.  
 DR N-PSDB; AAA13716.  
 XX  
 XX Production of hematopoietic cells suitable for administration to a  
 PT subject using progenitor cells and expanding the cells using stem cell  
 PT factor.  
 XX  
 XX Claim 21; Fig 15C; 123pp; English.  
 XX  
 CC A method has been developed of making haematopoietic cells suitable for  
 CC administration to a subject. The method comprises: (a) obtaining  
 CC haematopoietic progenitor cells from a donor; and (b) expanding the cells  
 CC by adding to the cells a haematopoietically effective dose of a  
 CC polypeptide product having at least part of the primary structural  
 CC confirmation and one or more of the biological properties of naturally  
 CC occurring stem cell factor (SCF). The method is useful for stimulating  
 CC primitive progenitor cells including early haematopoietic progenitor  
 CC cells which are capable of maturing to erythroid, megakaryocyte,  
 CC granulocyte, lymphocyte and macrophage cells. SCF results in absolute  
 CC increases in haematopoietic cells of both myeloid and lymphoid lineages.  
 CC SCF is useful for treating haematopoietic disorders. The method is useful  
 CC for expanding early haematopoietic progenitors in syngeneic, allogeneic  
 CC or autologous bone marrow transplant. SCF is useful for enhancing the  
 CC efficiency of gene therapy based on transfecting haematopoietic stem  
 CC cells. SCF is also useful for combating the myelosuppressive effects of  
 CC anti-HIV drugs such as AZT and for enhancing haematopoietic recovery  
 CC after acute blood loss and as a boost to the immune system for fighting  
 CC neoplasia (cancer). The present sequence represents a specifically  
 CC claimed human SCF from the present invention  
 XX  
 SQ Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 3; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTLYQLLLFNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKTQTWLTCTLYQLLLFNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPFHCWISWVQVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDDLVECVKENS 120  
 Db 61 MDVLPFHCWISWVQVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDDLVECVKENS 120  
 QY 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
 Db 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNKYYILI 208  
 Db 181 KPFMLPPVAASLRNDSSSNKYYILI 208  
 RESULT 4  
 AAB98355  
 ID AAB98355 standard; protein; 208 AA.  
 XX  
 AC AAB98355;  
 XX  
 XX 21-AUG-2001 (first entry)  
 XX  
 DE Human stem cell factor (SCF) protein SEQ ID NO:46.  
 XX  
 XX Stem cell factor; SCF; stem cell factor receptor; blood cell disorder;  
 KW gene therapy.  
 XX  
 XX Homo sapiens.  
 OS  
 XX US6207454-B1.  
 FN  
 XX

PD 27-MAR-2001.  
 XX  
 PF 31-DEC-1998; 98US-00224681.  
 XX  
 PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 25-NOV-1992; 92US-00982255.  
 PR 21-DEC-1993; 93US-00172329.  
 PR 24-MAY-1995; 95US-00449653.  
 PR 12-JAN-1998; 98US-00005893.  
 XX  
 PA (AMGE-) AMGEN INC.  
 XX  
 XX Zsebo KM, Bosselmann RA, Suggs SV, Martin FH;  
 PI WPI; 2001-366062/38.  
 XX  
 DR N-PSDB; AAH41341.  
 XX  
 CC Enhancing efficiency of transfer of polynucleotide into a target  
 CC mammalian cell in vitro, involves exposing cell that expresses a stem  
 CC cell factor receptor to stem cell factor, and introducing polynucleotide  
 CC into cell in vitro.  
 XX  
 CC Claim 16; Fig 15C; 210pp; English.  
 XX  
 CC The present invention describes a method for enhancing (E) the efficiency  
 CC of transfer of a polynucleotide (I) into a target mammalian cell (II) in  
 CC vitro, comprising exposing (II) that expresses a stem cell factor (SCF)  
 CC receptor to a biologically active SCF, its analogue or fragment, which  
 CC induces cell proliferation, and introducing (I) to (II) in vitro.  
 CC Exposure of SCF to (II) results in increased uptake of (I) into the cell.  
 CC The method is useful for enhancing the efficiency of the transfer of a  
 CC polynucleotide into a target mammalian cell in vitro. The method is  
 CC useful in gene therapy techniques. AAH41301 to AAH41364 and AAB98351 to  
 CC AAB98390 represent sequences used in the exemplification of the present  
 CC invention  
 XX  
 SQ Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 4; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTLYQLLLFNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKTQTWLTCTLYQLLLFNPLVKTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPFHCWISWVQVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDDLVECVKENS 120  
 Db 61 MDVLPFHCWISWVQVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDDLVECVKENS 120  
 QY 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
 Db 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNKYYILI 208  
 Db 181 KPFMLPPVAASLRNDSSSNKYYILI 208  
 RESULT 5  
 AAU02457  
 ID AAU02457 standard; protein; 208 AA.  
 XX  
 AC AAU02457;  
 XX  
 XX 29-AUG-2001 (first entry)  
 XX  
 DE Human SCF (stem cell factor) protein encoded by SCF cDNA.  
 XX  
 XX Human; stem cell factor; SCF; early haematopoietic progenitor cell;

KW blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;  
 KW anaemia; Kala azar; septicemia; malaria; hypopigmentation disorder.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH Peptide 1..25  
 FT /label= Signal\_peptide  
 FT Protein 26..208  
 FT /label= Mature\_SCF  
 XX  
 XX US6207417-B1.  
 XX  
 XX 27-MAR-2001.  
 XX  
 XX 07-JUN-1995; 95US-00482918.  
 XX  
 XX 16-OCT-1989; 89US-00422383.  
 XX 11-JUN-1990; 90US-00537198.  
 XX 24-AUG-1990; 90US-00573616.  
 XX 01-OCT-1990; 90US-00589701.  
 XX 21-DEC-1993; 93US-00172329.  
 XX (ZSEB/) ZSEBO K M.  
 PA (BOSS/) BOSSELMAN R A.  
 PA (SUGG/) SUGGS S V.  
 PA (MART/) MARTIN F H.  
 XX  
 XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 PI WPI: 2001-298941/31.  
 XX N-PSDB; AAS04121.  
 XX  
 XX Novel nucleic acids encoding stem cell factor useful for treating  
 PT disorders involving blood cells, e.g. leukaemia, splenomegaly, Hodgkin's  
 PT disease, Kala azar, anemia and septicemia.  
 XX  
 XX Example 3; Fig 15C; 209pp; English.  
 PS  
 XX The present sequence represents human SCF (stem cell factor) protein  
 CC encoded by SCF cDNA. The present invention relates to novel stem cell  
 CC factors (AAU02453-AAU02458, AAU02460, AAU02461) and the polynucleotides  
 CC encoding them. SCF stimulate primitive progenitor cells including early  
 CC haematopoietic progenitor cells. The invention also describes SCF  
 CC peptides (AAU02462-AAU02481) and the oligonucleotides (AAS04081-AAS04117)  
 CC used in the isolation of human and rat SCF sequences. The polynucleotide  
 CC encoding SCF is useful for producing SCF and useful in gene therapy. It  
 CC is useful for treating disorders involving blood cells such as  
 CC myelofibrosis, metastatic carcinoma, acute leukaemia, multiple myeloma,  
 CC Hodgkin's disease, lymphoma, Gaucher's disease, anaemia, congestive  
 CC splenomegaly, Kala azar, sarcoidosis, military tuberculosis, disseminated  
 CC fungus disease, Fulminating septicemia, malaria, vitamin B12 and folic  
 CC acid deficiency, pyridoxine deficiency, and hypopigmentation disorders  
 CC such as piebaldism and vitiligo  
 XX  
 SQ Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 4; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWILTCTIYQLLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
 DB 1 MKKTQTWILTCTIYQLLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
 QY 61 MDVLPSCHWISBWWQLSDSLDLDKFSNIGSELSNYIIDLKVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCHWISBWWQLSDSLDLDKFSNIGSELSNYIIDLKVNIVDDLVECVKENS 120  
 QY 121 KDLKSKFSPEPRLFTPEFFRIFNRSIDAFKDFVVASSETSDCVSSSTLSPEKDSRVST 180  
 DB 121 KDLKSKFSPEPRLFTPEFFRIFNRSIDAFKDFVVASSETSDCVSSSTLSPEKDSRVST 180

QY 181 KPFLPFPVVAASLRNDSSSSNSKYIYLI 208  
 DB 181 KPFLPFPVVAASLRNDSSSSNSKYIYLI 208  
 RESULT 6  
 AAB96940  
 ID AAB96940 standard; protein; 208 AA.  
 XX  
 AC AAB96940;  
 XX  
 DT 13-JUL-2001 (first entry)  
 XX  
 DE Human stem cell factor SEQ ID NO: 46.  
 XX  
 KW Human; rat; mammal; stem cell factor; SCF; cell growth stimulation;  
 KW gene therapy; haematopoietic disorder; aplastic anaemia; leukaemia;  
 KW neurological damage; intestinal damage; infertility; AIDS; SCID;  
 KW severe combined immunodeficiency.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT /label= signal\_peptide  
 FT Protein 26..208  
 FT /label= mature\_stem\_cell\_factor  
 XX  
 PN US6207802-B1.  
 XX  
 XX 27-MAR-2001.  
 XX  
 XX 09-NOV-1994; 94US-00336728.  
 XX  
 XX 16-OCT-1989; 89US-00422383.  
 XX 11-JUN-1990; 90US-00537198.  
 XX 24-AUG-1990; 90US-00573616.  
 XX 01-OCT-1990; 90US-00589701.  
 XX 25-NOV-1992; 92US-00982255.  
 XX (AMGE-) AMGEN INC.  
 PA Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 PI WPI: 2001-353108/37.  
 XX N-PSDB; AAF89101.  
 XX  
 XX Novel isolated non-human mammalian stem cell factor polypeptide  
 PT stimulating growth of early hematopoietic progenitor cells, useful for  
 PT treating aplastic anemia, lymphoma, Letterer-Siwe disease, Kala azar,  
 PT sarcoidosis.  
 XX  
 PS Disclosure; Fig 15C; 209pp; English.  
 XX  
 XX The present invention provides the protein and coding sequences of  
 CC mammalian stem cell factors (SCFs). These are capable of stimulating the  
 CC growth of early haematopoietic progenitor cells, neural stem cells and  
 CC primordial germ stem cells. The sequences are useful in the treatment of  
 CC leukaemias, haematopoietic disorders, aplastic anaemia, paroxysmal  
 CC nocturnal haemoglobinuria, malaria, pigmentation disorders, neurological  
 CC and intestinal damage, infertility, AIDS and severe combined  
 CC immunodeficiency (SCID). The present sequence is an SCF described in the  
 CC invention  
 XX  
 SQ Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 4; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWILTCTIYQLLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
 DB 1 MKKTQTWILTCTIYQLLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60

[illegible]

CC	splenomegaly, Kala azar, sarcoidosis, military tuberculosis, disseminated
CC	fungus disease, Fulminating septicaemia, malaria, vitamin B12 and folic
CC	acid deficiency, pyridoxine deficiency, and hypopigmentation disorders
CC	such as piebaldism and vitiligo
XX	
SQ	Sequence 208 AA;
	Query Match      100.0%; Score 1061; DB 4; Length 208;
	Best Local Similarity    100.0%; Pred. No. 2e-103;
	Matches 208; Conservative    0; Mismatches    0; Indels    0; Gaps    0
Qy	1 MKKTQTWLTTCIYLQLLFPNLVKTGECRRRVTVNNVKDVTKLVANLPKDYMITLKYPVG 60
Dd	1 MKKTQTWLTTCIYLQLLFPNLVKTGECRRRVTVNNVKDVTKLVANLPKDYMITLKYPVG 60
Qy	61 MDVLPSHCWSEMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVINVDLLVECVKENSS 120
Dd	61 MDVLPSHCWSEMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVINVDLLVECVKENSS 120
Qy	121 KDCLKSPKSPEPRLFTPEEPFRIFNRSIDAFKDFVAASSETSCVVSSTLSPEKDSRVSVT 180
Dd	121 KDCLKSPKSPEPRLFTPEEPFRIFNRSIDAFKDFVAASSETSCVVSSTLSPEKDSRVSVT 180
Qy	181 KPFMPLPPVAASSLNLDSSSSNSKIYILI 208
Dd	181 KPFMPLPPVAASSLNLDSSSSNSKIYILI 208

QY	61	MDVLPSHCWIS	EMVQLSDSLTDLDKESNI	SEGLSNYSIIIDKLVINI	VDDLVEVCWKNS	1
Dd	61	MDVLPSHCWIS	EMVQLSDSLTDLDKESNI	SEGLSNYSIIIDKLVINI	VDDLVEVCWKNS	1
QY	121	KDLKSKFKSP	PRLFTPEEPFRIFNRSIDA	KDFVASETSDCVVSSTLS	PEKDSRVSVT	1
Dd	121	KDLKSKFKSP	PRLFTPEEPFRIFNRSIDA	KDFVASETSDCVVSSTLS	PEKDSRVSVT	1
QY	181	KPFMLPPVAA	SSLRNDSSSSSKYIYL	I 208		
Dd	181	KPFMLPPVAA	SSLRNDSSSSSKYIYL	I 208		
RESULT 7						
AAB73565						
ID		AAB73565	standard; protein; 208 AA.			
XX	AC	AAB73565;				
XX	DT	07-AUG-2001	(first entry)			
XX	DE		Human SCF (stem cell factor) protein #2, encoded by SCF cDNA.			
XX	KW		Human; stem cell factor; SCF; early haematopoietic progenitor cell;			
KW	KM		blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;			
KW	KX		anaemia; Kala azar; septicaemia; malaria; hypopigmentation disorder.			
XX	OS		Homo sapiens.			
XX	PH		Key	Location/Qualifiers		
FT	Peptide		1. .25	/label= Signal_peptide		
FT	Protein		26. .208	/label= Mature_SCF		
FT						
FT						
PN	US6204363-B1.					
XX	PD	20-MAR-2001.				
XX	PJ					
XX	PF	25-NOV-1992;	92US-00982255.			
XX	PR	16-OCT-1989;	89US-00422383.			
PR	PR	11-JUN-1990;	90US-00537198.			
PR	PR	24-AUG-1990;	90US-00573616.			
PR	PR	01-OCT-1990;	90US-00589701.			
PR	PR	10-APR-1991;	91US-00684535.			
XX	PA	(AMGE-) AMGEN INC.				
XX	PI	Zeebo KM, Bosselman RA, Suggs SV, Martin PH;				
XX	PT	WPI; 2001-2566683/26.				
DR	N-PSDB; AAH23899.					
XX						
PT		New stem cell factor polypeptides and their analogs which stimulate				
PT		growth of early hematopoietic progenitors, useful for treating aplastic				
PT		anemia, carcinoma, multiple myeloma, vitiligo, kala azar, Hodgkin's				
PT		disease.				
XX						
PS	Claim 1; Fig 15C; 16pp; English.					
XX						
CC	The present sequence represents human SCF (stem cell factor) protein					
CC	encoded by SCF cDNA. The present invention relates to novel stem cell					
CC	factors (AAB73561-AAB73568, AAB73571-AAB73576) and the polynucleotides					
CC	encoding them. SCF stimulate primitive progenitor cells including early					
CC	haematopoietic progenitor cells. The invention also describes SCF					
CC	peptides (AAB73578-AAB73597) and the oligonucleotides (AAH23859-AAH23899)					
CC	used in the isolation of human and rat SCF sequences. The polynucleotide					
CC	encoding SCF is useful for producing SCF and useful in gene therapy. It					
CC	is useful for treating disorders involving blood cells such as					
CC	myelofibrosis, metastatic carcinoma, acute leukaemia, multiple myeloma,					
CC	Hodgkin's disease, lymphoma, Gaucher's disease, anaemia congestive					

XX The present sequence represents human SCF (stem cell factor) protein  
 CC encoded by SCF cDNA. The present invention relates to novel stem cell  
 CC factors (AAU02761-AAU02767, AAU02770-AAU02775, AAU02797) and the  
 CC polynucleotides encoding them. SCF stimulate primitive progenitor cells  
 CC including early haematopoietic progenitor cells. The invention also  
 CC describes SCF peptides (AAU02777-AAU02794) and the oligonucleotides  
 CC (AAS04182-AAS04218) used in the isolation of human and rat SCF sequences.  
 CC The polynucleotide encoding SCF is useful for producing SCF and useful in  
 CC gene therapy. It is useful for treating disorders involving blood cells  
 CC such as myelofibrosis, metastatic carcinoma, acute leukaemia, multiple  
 CC myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, anaemia,  
 CC congestive splenomegaly, Kala azar, sarcoidosis, military tuberculosis,  
 CC disseminated fungus disease, Fulminating septicemia, malaria, vitamin B12  
 CC and folic acid deficiency, pyridoxine deficiency, and hypopigmentation  
 CC disorders such as piebaldism and vitiligo  
 XX  
 SQ Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 4; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVKCKNSS 120  
 DB 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVKCKNSS 120  
 QY 121 KDLKSKFSKSPRLFTPEEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
 DB 121 KDLKSKFSKSPRLFTPEEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
 DB 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
 RESULT 9  
 AAU05255  
 ID AAU05255 standard; protein; 208 AA.  
 XX AAU05255;  
 AC AAU05255;  
 XX  
 DT 24-OCT-2001 (first entry)  
 DE Human stem cell factor (SCF) protein encoded by SCF cDNA.  
 XX  
 KW Human; stem cell factor; SCF; haematopoietic progenitor cell;  
 KW blood disorder; Hodgkin's disease; vitamin B12; folic acid deficiency;  
 KW hypopigmentation disorder; viral disorder; AIDS.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT /label= Signal\_peptide  
 FT Protein 26..208  
 FT /label= Mature\_SCF  
 XX  
 XX US6248319-B1.  
 PN 19-JUN-2001.  
 PD  
 XX  
 XX 24-MAY-1995; 95US-00449653.  
 XX  
 PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 10-APR-1991; 91US-00684535.  
 PR

PR 25-NOV-1992; 92US-00982255.  
 PR 21-DEC-1993; 93US-00172329.  
 XX  
 PA (ZSEB/) ZSEBO K M.  
 PA (BOSS/) BOSSELMAN R A.  
 PA (SUGG/) SUGGS S V.  
 PA (MART/) MARTIN F H.  
 XX  
 PI Zsebo KM, Boesselman RA, Suggs SV, Martin FH;  
 XX WPI; 2001-407312/43.  
 DR N-PSDB; AAS10457.  
 XX  
 XX Increasing the number of early hematopoietic progenitor cells in the  
 PT peripheral blood useful for the treatment of blood disorders including  
 PT Hodgkin's disease comprises the administration of human stem cell factor.  
 XX  
 PS Example 3; Fig 15C; 210pp; English.  
 XX  
 CC The present sequence represents human stem cell factor (SCF). The  
 CC sequence is described in an invention relating to novel stem cell  
 CC factors, the polynucleotides encoding them and methods for producing the  
 CC stem cell factors. The methods involve increasing the number of early  
 CC haematopoietic progenitor cells in human peripheral blood by  
 CC administering a haematopoietically effective human stem cell  
 CC polypeptide. The methods are useful for the treatment of blood disorders,  
 CC including myelofibrosis, myelocytosis, osteopetrosis, metastatic  
 CC carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease,  
 CC lymphoma, Gaucher's disease, Niemann-Pick disease, refractory anaemia,  
 CC malaria, vitamin B12 and folic acid deficiency, hypopigmentation  
 CC disorders i.e. piebaldism and viral induced disorders, including AIDS  
 XX  
 SQ Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 4; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVKCKNSS 120  
 DB 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVKCKNSS 120  
 QY 121 KDLKSKFSKSPRLFTPEEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
 DB 121 KDLKSKFSKSPRLFTPEEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
 DB 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
 RESULT 10  
 AAU05255  
 ID AAU05255 standard; protein; 208 AA.  
 XX AAU05255;  
 AC AAU05255;  
 XX  
 DT 25-JUL-2002 (first entry)  
 DE Human stem cell factor (SCF) protein #2.  
 XX  
 KW Human; stem cell factor; SCF protein; leucopaenia; thrombocytopaenia;  
 KW anaemia; myelosuppression; nerve damage; myeloproliferative disorder;  
 KW infertility; neoplasia; myelofibrosis; myelocytosis; osteopetrosis;  
 KW metastatic carcinoma; acute leukaemia; multiple myeloma; sarcoidosis;  
 KW Hodgkin's disease; lymphoma; Gaucher's disease; Niemann-Pick disease;  
 KW Letterer-Siwe disease; refractory erythroblastic anaemia; Kala azar;  
 KW Di Guglielmo syndrome; congestive splenomegaly; splenic pancytopenia;  
 KW disseminated fungus disease; Fulminating septicemia; piebaldism; AIDS;  
 KW

acquired immune deficiency syndrome; malaria; military tuberculosis; pyridoxine deficiency; vitamin B12 deficiency; folic acid deficiency; Diamond Blackfan anaemia; hypopigmentation disorder; vitiligo.

Homo sapiens.

Key Location/Qualifiers  
 1..25 /label= signal-peptide  
 26..208 /note= "Human mature SCF protein"

US2002018763-A1.  
 14-FEB-2002.  
 12-JAN-1998; 98US-00005243.  
 24-MAY-1995; 95US-00449653.  
 (ZSEB/) ZSEBO K M.  
 (BOSS/) BOSSELMAN R A.  
 (SUGG/) SUGGS S V.  
 (MART/) MARTIN F H.  
 Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 WPI; 2002-350789/38.  
 N-PSDB; AAD35474.

Novel non-naturally-occurring stem cell factor polypeptide, useful for treating leucopenia, thrombocytopenia, anemia and for enhancing engraftment of bone marrow during transplantation in a mammal.

Claim 9; Fig 15C; 217pp; English.

The present invention relates to novel non-naturally-occurring stem cell factor (SCF) polypeptides having an amino acid sequence sufficiently duplicative of that of naturally-occurring SCF to allow possession of haematopoietic biological activity of naturally occurring SCF. Sequences of the invention are useful for treating leucopenia, thrombocytopenia, anaemia and for enhancing bone marrow recovery in treatment of radiation, engraftment of bone marrow during transplantation in mammals and chemical or chemotherapeutic induced bone marrow aplasia or myelosuppression. They are also useful for treating acquired immune deficiency in a human, nerve damage, neoplasia, infertility, myeloproliferative disorder, intestinal damage in a mammal. SCF sequences are useful for preparing biologically active polymer polypeptide adduct, for enhancing transfection of early haematopoietic progenitor cells with a gene, and transfer of a gene into a mammal. They are useful for treating myelofibrosis, myelosclerosis, osteopetrosis, metastatic carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, Niemann-Pick disease, Letterer-Siwe disease, refractory erythroblastic anaemia, Di Guglielmo syndrome, congestive splenomegaly, Kala azar, sarcoidosis, primary splenic pancytopenia, disseminated fungus disease, malaria, military tuberculosis, Fulminating septicaemia, pyridoxine deficiency, vitamin B12 and folic acid deficiency, Diamond Blackfan anaemia, hypopigmentation disorders such as piebaldism, AIDS (acquired immune deficiency syndrome) and vitiligo. The present sequence is human SCF protein

Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 5; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 MKKTQTWILTCIYQLLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYVPG 60  
 1 MKKTQTWILTCIYQLLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYVPG 60

61 MDVLPSCWISWMVQVLSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVECVKNS 120  
 61 MDVLPSCWISWMVQVLSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVECVKNS 120

121 KDLKSKFSKPEPRLTPEEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPKDSRVSVT 180  
 121 KDLKSKFSKPEPRLTPEEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPKDSRVSVT 180

181 KPFMLPPVAASLRNDSSSSNSKIYILI 208  
 181 KPFMLPPVAASLRNDSSSSNSKIYILI 208

RESULT 11  
 ABG95641  
 ID ABG95641 standard; protein; 208 AA.  
 XX  
 AC ABG95641;  
 XX  
 DT 05-DEC-2002 (first entry)  
 XX  
 DE Human SCF protein sequence encoded by cDNA.  
 XX  
 KW Stem cell factor; SCF; blood-forming system; blood cell disorder; haematopoietic system; metastatic carcinoma; acute leukaemia; multiple myeloma; Hodgkin's disease; lymphoma; malaria; vitiligo; refractory erythroblastic anaemia; military tuberculosis; cytostatic; disseminated fungus disease; haematopoietic; tuberculous; antianaemic; antifungal; antimalarial; dermatological; human.  
 XX  
 OS Homo sapiens.  
 XX  
 FN EP1241258-A2.  
 XX  
 PD 18-SEP-2002.  
 XX  
 PF 04-OCT-1990; 2002EP-00008587.  
 XX  
 PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 28-SEP-1990; 90WO-US005548.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 04-OCT-1990; 90EP-00310899.  
 PR 04-OCT-1990; 95EP-00105391.  
 XX  
 (AMGE-) AMGEN INC.  
 XX  
 Zsebo KM, Suggs SV, Bosselman RA, Martin FH;  
 WPI; 2002-684093/74.  
 N-PSDB; ABS73858.

Production of a human stem cell factor (SCF) polypeptide for treating disorders involving blood cells, such as leukemia, comprises culturing mammalian cells comprising non-human SCF promoter DNA linked to DNA encoding the human SCF.

Claim 1; Fig 15C; 120pp; English.

The present invention relates to novel stem cell factors (SCFs), polynucleotide sequences encoding the SCFs, and methods of producing them. SCFs are involved in the blood-forming (haematopoietic) system in mammals, particularly humans. The method of the invention is useful for the production of human SCF. The stem cell factors are useful to treat disorders involving blood cells e.g. metastatic carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease, lymphoma, refractory erythroblastic anaemia, military tuberculosis, disseminated fungus disease, malaria, and vitiligo. The present sequence represents human SCF protein

Sequence 208 AA;  
 Query Match 100.0%; Score 1061; DB 5; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSFKSPPEPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKSFKSPPEPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
DB 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
RESULT 12  
ID ADE52474 standard; protein; 208 AA.  
AC ADE52474;  
DT 29-JAN-2004 (first entry)  
XX Human stem cell factor (SCF) polypeptide #2.  
DE Human; stem cell factor; SCF; haematopoietic activity; infertility;  
KW intestinal damage; myeloproliferative disorder; leucopenia;  
KW thrombocytopenia; anaemia; bone marrow transplant; immune deficiency;  
KW neoplasia; nerve damage; osteoporosis; metastatic carcinoma; leukaemia;  
KW myelary tuberculosis; haematopoietic progenitor cell.  
OS Homo sapiens.  
XX US2002031491-A1.  
PN 14-MAR-2002.  
PD 31-DEC-1998; 98US-00224683.  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 01-OCT-1990; 90US-00589701.  
PR 10-APR-1991; 91US-00684535.  
PR 25-NOV-1992; 92US-00982255.  
PR 21-DEC-1993; 93US-00172329.  
PR 24-MAY-1995; 95US-00449653.  
PR 12-JAN-1998; 98US-00005893.  
XX (ZSEB/) ZSEBO K M.  
PA (BOSS/) BOSSELMAN R A.  
PA (SUGG/) SUGGS S V.  
PA (MART/) MARTIN F H.  
XX Zsebo KM, Bosseelman RA, Suggs SV, Martin FH;  
XX WPI: 2003-851459/79.  
DR N-PSDB; ADE52473.  
XX New non-natural stem cell factor, useful for treating e.g. leucopenia or  
PT immune deficiency, also related nucleic acid and antibodies.  
XX Claim 9; SEQ ID NO 46; 217pp; English.  
XX The invention relates to stem cell factor (SCF) polypeptides with  
CC haematopoietic activity and the polynucleotides encoding them. The  
CC polypeptides are used for treating infertility, intestinal damage,  
CC myeloproliferative disorders, leucopenia, thrombocytopenia or anaemia,  
CC for improving engraftment of bone marrow transplants, for enhancing bone  
CC marrow recovery after radiotherapy or chemotherapy and in treatment of

CC immune deficiency, neoplasia, nerve damage, osteoporosis, metastatic  
CC carcinoma, leukaemia and myelary tuberculosis. The SCF polypeptides are  
CC also used to expand haematopoietic progenitor cells for transplantation  
CC and to prepare such cells for transfection with a gene. The SCF  
CC polynucleotides can be used for recombinant expression of the  
CC polypeptides and also as probes for mapping of the SCF gene, for  
CC identifying SCF-related diseases and as a marker for neighbouring genes.  
CC Antibodies raised against the polypeptides are useful in diagnosis and to  
CC remove SCF from blood. This sequence represents an SCF polypeptide of the  
CC invention.  
XX  
SQ Sequence 208 AA;  
Query Match 100.0%; Score 1061; DB 7; Length 208;  
Best Local Similarity 100.0%; Pred. No. 2e-103;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSFKSPPEPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKSFKSPPEPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
DB 181 KPFMLPPVAASLRNDSSSNKYIYLI 208  
RESULT 13  
ADP99316  
ID ADP99316 standard; protein; 208 AA.  
XX  
AC ADP99316;  
XX  
DT 23-SEP-2004 (first entry)  
XX Human stem cell factor, SCF, protein #2.  
DE Human; SCF; stem cell factor; gene therapy;  
XX haematopoietic progenitor cell; aplastic anaemia;  
KW paroxysmal nocturnal haemoglobinuria; myelofibrosis; myeloclerosis;  
KW osteopetrosis; metastatic carcinoma; acute leukaemia; multiple myeloma;  
KW Hodgkin's disease; lymphoma; Gaucher's disease; Niemann-Pick disease;  
KW Letterer-Siwe disease; refractory erythroblastic anaemia;  
KW Di Guglielmo syndrome; congestive splenomegaly; Kala awar; sarcoidosis;  
KW primary splenic pancytopenia; myelary tuberculosis;  
KW disseminated fungus disease; Fulminating septicemia; malaria;  
KW vitamin B12 deficiency; folic acid deficiency; pyridoxine deficiency;  
KW Diamond Blackfan anaemia; hypopigmentation disorder; piebaldism;  
KW vitiligo; neurological damage; infertility; intestinal damage;  
KW irradiation; chemotherapy; AIDS; haematopoietic recovery;  
KW acute blood loss; neoplasm; cancer.  
XX Homo sapiens.  
OS  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..25 /note= "Signal peptide"  
FT Protein 26..208 /note= "Mature SCF"  
XX  
XX US6759215-B1.  
XX 06-JUL-2004.  
PD  
XX 07-AUG-2000; 2000US-00635251.  
XX



PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 10-APR-1991; 91US-00684535.  
 PR 25-NOV-1992; 92US-00982255.  
 PR 21-DEC-1993; 93US-00172329.  
 PR 24-MAY-1995; 95US-00449182.  
 XX  
 PA (AMGE-) AMGEN INC.  
 XX  
 PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 XX  
 XX WPI; 2004-497128/47.  
 DR N-PSDB; ADP99315.  
 XX  
 PT Preparing a human stem cell factor (SCF) polypeptide, useful for treating  
 PT hematopoietic disorders, e.g., aplastic anemia, comprises growing host  
 PT cells transformed or transfected with DNA encoding a human SCF.  
 XX  
 XX Claim 1; SEQ ID NO 46; 210pp; English.  
 PS  
 XX The invention relates to preparing a (vertebrate) human stem cell factor  
 CC (SCF) polypeptide comprising growing host cells transformed or  
 CC transfected with DNA encoding a human SCF that stimulates growth of  
 CC haematopoietic progenitor cells under nutrient conditions, the DNA being  
 CC operatively linked to an expression control sequence, and isolating the  
 CC polypeptide produced. Also included is a recombinant host cell  
 CC transformed or transfected with an expression construct comprising a  
 CC vertebrate SCF polypeptide-encoding DNA operatively linked to a  
 CC heterologous expression regulatory sequence, permitting the expression of  
 CC the vertebrate SCF polypeptide in the host cell. Disclosed as new are rat  
 CC and human nucleic acids encoding SCF, SCF proteins from a number of other  
 CC mammals and recombinantly expressed SCF protein fragments. The DNA  
 CC sequences are useful for effecting the large scale synthesis of SCF by a  
 CC variety of recombinant techniques or for generating new and useful viral  
 CC and circular plasmid DNA vectors, new and useful transformed and  
 CC transfected prokaryotic and eukaryotic host cells, and new and useful  
 CC methods for cultured growth of such host cells capable of expression of  
 CC SCF and its related products. The DNA sequences are also useful as  
 CC labelled probes in isolating human genomic DNA encoding SCF, in methods  
 CC of protein synthesis, in genetic therapy in humans and other mammals, and  
 CC in developing transgenic mammalian species which may serve as eukaryotic  
 CC hosts for production of SCF and SCF products in quantity. The SCF is  
 CC useful for treating haematopoietic disorders, e.g., aplastic anaemia,  
 CC paroxysmal nocturnal haemoglobinuria, myelofibrosis, myeloclerosis,  
 CC osteopetrosis, metastatic carcinoma, acute leukaemia, multiple myeloma,  
 CC Hodgkin's disease, lymphoma, Gaucher's disease, Niemann-Pick disease,  
 CC Letterer-Siwe disease, refractory erythroid blast leukaemia, Di Guglielmo  
 CC syndrome, congestive splenomegaly, Kala awar, sarcoidosis, primary  
 CC splenic pancytopenia, military tuberculosis, disseminated fungus disease,  
 CC Fulminating septicemia, malaria, vitamin B 12 and folic acid deficiency,  
 CC pyridoxine deficiency, Diamond Blackfan anaemia, and hypopigmentation  
 CC disorders such as piebaldism and vitiligo. The SCF are also useful for  
 CC treating neurological damage, infertility states, intestinal damage  
 CC resulting from irradiation or chemotherapy, and AIDS. SCF is also useful  
 CC for enhancing haematopoietic recovery after acute blood loss and as a  
 CC boost to the immune system for fighting neoplasia (cancer). The present  
 CC sequence is a human SCF protein sequence (partial or full length).  
 XX  
 SQ Sequence 208 AA;

Query Match 100.0%; Score 1061; DB 8; Length 208;  
 Best Local Similarity 100.0%; Pred. No. 2e-103;  
 Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 1 MKKTQTWLTCTYQLQLLPNPLVKTGICRNRVTNNVKDVTXKLVANLPKDYMITLKYVPG 60  
 1 MKKTQTWLTCTYQLQLLPNPLVKTGICRNRVTNNVKDVTXKLVANLPKDYMITLKYVPG 60  
 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLNVIVDDLVECKVENS 120  
 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLNVIVDDLVECKVENS 120

QY 121 KDLKSKFKSPBRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPBKDSRVSVT 180  
 DB 121 KDLKSKFKSPBRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPBKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSNSSSKYIYLI 208  
 DB 181 KPFMLPPVAASLRNDSNSSSKYIYLI 208

RESULT 14  
 ADUS0646  
 ID ADUS0646 standard; protein; 208 AA.  
 XX  
 AC ADUS0646;  
 XX  
 DT 13-JAN-2005 (first entry)  
 XX  
 DE Human stem cell factor, full length protein #1.  
 XX  
 KW Human; stem cell factor; SCF; haematopoietic;  
 KW HT1080 fibrosarcoma cell line; 5637 bladder carcinoma cell line;  
 KW leukaemia; thrombocytopaenia; anaemia; bone marrow during transplant;  
 KW bone marrow aplasia; myelosuppression; immune deficiency; neoplasm;  
 KW nerve damage; infertility; intestinal damage;  
 KW myeloproliferative disorder; early haematopoietic progenitor cell;  
 KW haematopoietic disorders; aplastic anaemia; myelofibrosis;  
 KW myeloclerosis; osteopetrosis; metastatic carcinoma; multiple myeloma;  
 KW Hodgkin's disease; lymphoma; Gaucher's disease; Niemann-Pick disease;  
 KW Diamond-Blackfan anaemia; DBA; Panconi's anaemia; gene therapy;  
 KW acute blood loss.  
 XX  
 OS Homo sapiens.  
 XX  
 PN US2004181044-A1.  
 XX  
 PD 16-SEP-2004.  
 XX  
 PF 19-JUN-2002; 2002US-00175608.  
 XX  
 PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 10-APR-1991; 91US-00684535.  
 PR 25-NOV-1992; 92US-00982255.  
 PR 21-DEC-1993; 93US-00172329.  
 PR 07-JUN-1995; 95US-00486546.  
 PR 07-AUG-2000; 2000US-00635249.  
 XX  
 PA (ZSRB/) ZSEBO K M.  
 PA (BOSS/) BOSSELMAN R A.  
 PA (SUGG/) SUGGS S V.  
 PA (MART/) MARTIN F H.  
 XX  
 PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 XX  
 XX WPI; 2004-707481/59.  
 XX  
 PT Novel stem cell factor (SCF) such as non-naturally-occurring SCF or  
 PT naturally occurring SCF, useful for treating leukopenia,  
 PT thrombocytopaenia, anemia, and enhancing engraftment of bone marrow during  
 PT transplantation.  
 XX  
 PS Claim 9; SEQ ID NO 46; 216pp; English.  
 XX  
 CC The invention relates to a stem cell factor (SCF) such as non-naturally-  
 CC occurring SCF having an amino acid sequence sufficiently duplicative of  
 CC that of naturally occurring SCF to allow possession of a haematopoietic  
 CC biological activity of naturally occurring stem cell factor, or naturally  
 CC occurring SCF. Also included are an isolated DNA sequence for use in  
 CC securing expression in a prokaryotic or eukaryotic host cell of non-  
 CC naturally occurring SCF, a prokaryotic or eukaryotic host cell

CC transformed or transfected with the DNA, a polypeptide product of the  
CC expression of the DNA in a prokaryotic or eukaryotic host cell, an  
CC isolated DNA sequence coding for prokaryotic or eukaryotic host  
CC expression of non-naturally occurring SCF, a DNA sequence coding for a  
CC polypeptide fragment or polypeptide analogue of naturally-occurring stem  
CC cell factor, a biologically functional plasmid or viral DNA vector  
CC including the DNA sequence above, a prokaryotic or eukaryotic host cell  
CC stably transformed or transfected with the DNA, a polypeptide having part  
CC or all of amino acid sequence encoded by composite nucleic acid sequence  
CC of human SCF cDNA, human SCF cDNA obtained from HT1080  
CC fibrosarcoma cell line, or human SCF cDNA obtained from 5637 bladder  
CC carcinoma cell line (and having one or more of in vitro biological  
CC activity of naturally-occurring stem cell factor, and an antibody (Ab)  
CC specifically binding SCF. SCF is useful for treating leukopenia,  
CC thrombocytopenia, anaemia, and enhancing engraftment of bone marrow  
CC during transplantation in a mammal. SCF is useful enhancing bone marrow  
CC recovery in treatment of radiation, chemical, or chemotherapeutic induced  
CC bone marrow aplasia or myelosuppression which involves treating patients  
CC with therapeutically effective doses of SCF. SCF is useful for treating  
CC acquired immune deficiency, neoplasia, nerve damage, infertility,  
CC intestinal damage, and a myeloproliferative disorder. SCF is useful for  
CC transfecting early haematopoietic progenitor cells with a gene which  
CC involves culturing early haematopoietic progenitor cells with SCF, and  
CC transfecting the cultured cells with a gene. SCF is useful for  
CC transfecting a gene to a mammal which involves culturing early  
CC haematopoietic progenitor cells with SCF, transfecting the cultured cells  
CC with a gene, and administering the cultured cell to the mammal. SCF is  
CC useful for treating various haematopoietic disorders, aplastic anaemia,  
CC myelofibrosis, myeloclerosis, osteopetrosis, metastatic carcinoma, acute  
CC leukaemia, multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's  
CC disease, Niemann-Pick disease, Diamond-Blackfan anaemia (DBA), Fanconi's  
CC anaemia. SCF is useful for enhancing the efficiency of gene therapy, for  
CC enhancing haematopoietic recovery after acute blood loss. The present  
CC sequence is a human SCF protein sequence.

XX Sequence 208 AA;  
SQ  
Query Match 100.0%; Score 1061; DB 8; Length 208;  
Best Local Similarity 100.0%; Pred. No. 2e-103;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWILTCYLOLLFNPLVKTGICRNVTNNKDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWILTCYLOLLFNPLVKTGICRNVTNNKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISVMVQLSDSLDLDKFSNI SEGLSNYSIIDKLNVINDDLVECVKENS 120  
DB 61 MDVLPSCWISVMVQLSDSLDLDKFSNI SEGLSNYSIIDKLNVINDDLVECVKENS 120  
QY 121 KDLKSKFSPERLPFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVSVT 180  
DB 121 KDLKSKFSPERLPFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVSVT 180  
QY 181 KPFMLPPVAASSLRNDSSSNKYIYLI 208  
DB 181 KPFMLPPVAASSLRNDSSSNKYIYLI 208

RESULT 15  
ADW93091  
ID ADW93091 standard; protein; 208 AA.  
XX  
AC ADW93091;  
XX  
DT 21-APR-2005 (first entry)  
XX  
DE Human Stem Cell Factor, SEQ ID 46.  
XX  
KW Antianemic; Antiemetic; Cytostatic; Anti-HIV; Cardiovascular-Gen.;  
KW CNS-Gen.; Antiparasitic; Antibacterial; Immunosuppressive;  
KW Antiinflammatory; Fungicide; Antifertility; AIDS; aplastic anemia;  
KW paroxysmal nocturnal hemoglobinuria; osteopetrosis; acute leukemia;  
KW multiple myeloma; hodgkins disease; lymphoma; gauchers disease;

KW niemann pick disease; sarcoidosis; plasmodium infection;  
KW vitamin deficiency; hypopigmentation; vitiligo; infertility;  
KW chronic myelocytic leukemia; cell proliferation; Stem Cell Factor.  
XX  
OS Homo sapiens.  
XX  
XX Key Location/Qualifiers  
XX Peptide 1. .25  
XX Protein 26. .208 /label= Signal\_peptide  
XX /label= Mature\_protein  
XX  
XX US6852313-B1.  
XX  
XX 08-FEB-2005.  
XX  
XX 26-JUN-2000; 2000US-00604325.  
XX  
XX 16-OCT-1989; 89US-00422383.  
XX 11-JUN-1990; 90US-00537198.  
XX 24-AUG-1990; 90US-00573616.  
XX 01-OCT-1990; 90US-00589701.  
XX 10-APR-1991; 91US-00684535.  
XX 25-NOV-1992; 92US-00982255.  
XX 21-DEC-1993; 93US-00172329.  
XX 24-MAY-1995; 95US-00449649.  
XX (AMGE-) AMGEN INC.  
XX  
XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
XX  
XX WPI; 2005-160562/17.  
XX N-PSDB; ADW93090.  
XX  
XX Stimulating proliferation of melanocyte cells in human, involves  
XX administering stem cell factor polypeptide or its biologically active  
XX fragments stimulating growth of melanocyte cells, and optionally carrier,  
XX to human.

XX Claim 2; SEQ ID NO 46; 212pp; English.  
XX  
XX The present invention relates to a method (M1) for stimulating  
XX proliferation of melanocyte cells in a human. (M1) involves administering  
XX a Stem Cell Factor (SCF) protein, or its biologically active fragments  
XX that stimulates growth of melanocyte cells, and optionally a carrier, to  
XX the human. The SCF is covalently conjugated to a water soluble polymer  
XX e.g. polyethylene glycol. Also, the SCF is co-administered with one or  
XX more other cytokines. SCF is also able to stimulate the growth of  
XX primitive progenitors such as early hematopoietic progenitor cells that  
XX are capable of maturing to erythroid, megakaryocyte, granulocyte,  
XX lymphocyte and macrophage cells, and non-hematopoietic stem cells such as  
XX neural stem cells and primordial germ stem cells. (M1) is useful in  
XX accelerating bone marrow regeneration, and in augmenting T cell  
XX production. (M1) is useful for treating stem cells disorders that are  
XX characterized by a reduction in functional marrow mass due to toxic,  
XX radiant or immunological injury. (M1) is useful in treating AIDS,  
XX aplastic anemia, paroxysmal nocturnal hemoglobinuria, myelofibrosis,  
XX myelosclerosis, osteopetrosis, metastatic carcinoma, acute leukemia,  
XX multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, Niemann  
XX -Pick disease, congestive splenomegaly, Kalaazar, sarcoidosis, primary  
XX splenic pancytopenia, disseminated fungus disease, fulminating  
XX septicemia, malaria, vitamin B12 and folic acid deficiency disease,  
XX pyridoxine deficiency disease, and hypopigmentation disorders such as  
XX piebaldism and vitiligo. (M1) is useful in treating infertility states,  
XX intestinal damage resulting from irradiation or chemotherapy, and stem  
XX cell myeloproliferative disorders such as chronic myelogenous leukemia,  
XX primary thrombocythemia and acute leukemia. (M1) is useful in expanding  
XX early hematopoietic progenitors in syngeneic, allogeneic or autologous  
XX bone marrow transplantation, and in enhancing the efficacy of gene  
XX therapy. The present sequence was used to illustrate the invention.  
XX  
XX Sequence 208 AA;  
SQ

```
Query Match      100.0%; Score 1061; DB 9; Length 208;
Best Local Similarity 100.0%; Pred. No. 2e-103;
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCTIYQLLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60
   |||||
Db 1 MKKTQTWILTCTIYQLLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60
   |||||

QY 61 MDVLPCHCWISEMWWQSDSLTDLDFKFSNISEGLSNYSIIDKLNVIVDDLVCEVKENSS 120
   |||||
Db 61 MDVLPCHCWISEMWWQSDSLTDLDFKFSNISEGLSNYSIIDKLNVIVDDLVCEVKENSS 120
   |||||

QY 121 KDLKKSFKSPERLFTPEEFPFRIFNRSIDAFKDFVVASETSDCVVSSTLSPEKDSRVSVT 180
   |||||
Db 121 KDLKKSFKSPERLFTPEEFPFRIFNRSIDAFKDFVVASETSDCVVSSTLSPEKDSRVSVT 180
   |||||

QY 181 KPFMLPPVAASSLRNDSSSSNSKYIYLI 208
   |||||
Db 181 KPFMLPPVAASSLRNDSSSSNSKYIYLI 208
   |||||
```

Search completed: February 22, 2006, 18:12:59  
Job time : 125.336 secs

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GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:13:23 ; Search time 17.1901 Seconds  
(without alignments)  
1164.223 Million cell updates/sec

Title: US-10-620-642-46  
Perfect score: 1061  
Sequence: 1 MKKTQTWLTCTIYLQLLFFN.....AASSLRNDSSSSNKIYILI 208  
Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues  
Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : PIR 80: \*  
1: pir1: \*  
2: pir2: \*  
3: pir3: \*  
4: pir4: \*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1030	97.1	273	2 A35974	mast cell growth f
2	899.5	84.8	274	2 I46575	c-kit ligand - pig
3	890	83.9	245	2 B61190	mast cell growth f
4	886.5	83.6	274	2 S47571	stem cell factor,
5	885.5	83.5	202	2 S58313	stem cell factor p
6	862.5	81.3	274	2 I46929	stem cell factor -
7	857	80.8	201	2 B35974	stem cell growth f
8	855	80.6	273	2 S65801	mast cell growth f
9	715	67.4	245	2 A37934	stem cell factor -
10	576.5	54.3	124	2 S29052	stem cell factor 1
11	570.5	53.8	287	2 S70366	stem cell factor p
12	562.5	53.0	287	2 JN0637	stem cell factor s
13	479.5	45.2	253	2 S70367	mast cell growth f
14	175.5	16.5	51	2 B35971	mast cell growth f
15	172.5	16.3	49	2 A35971	hypothetical prote
16	97.5	9.2	1490	2 T16086	hypothetical prote
17	97	9.1	1447	2 F82909	hypothetical prote
18	94	8.9	1293	2 T27886	hypothetical prote
19	94	8.9	1813	2 T19295	hypothetical prote
20	92.5	8.7	164	2 B69616	cell-division init
21	92.5	8.7	512	2 G86773	citrates (pro-3S)-1
22	92	8.7	935	2 S63261	SEC21 protein - ye
23	91	8.6	1107	2 S61667	probable membrane
24	90.5	8.5	616	2 A69136	ATP-dependent Clp
25	89	8.4	1734	2 A41101	phorbol ester-bind
26	88.5	8.3	545	2 B44054	orf2 protein - Jun
27	88.5	8.3	941	2 H84855	phosphoenolpyruvat
28	88	8.3	335	2 S44922	K18 antigen - Enta
29	88	8.3	465	2 H97165	flagellar hook-len

membrane-associate  
DNA-directed RNA p  
probable protein k  
phosphoenolpyruvat  
hypothetical prote  
hypothetical prote  
protein F28J9.3 [1  
BRO1 protein - yea  
hypothetical ABC tra  
molybdenum ABC tra  
threonine synthase  
hypothetical prote  
hypothetical prote  
probable protein k  
merozoite surface

ALIGNMENTS

RESULT 1  
A35974  
mast cell growth factor precursor - human  
N:Alternate names: kit ligand, stem cell factor  
C:Species: Homo sapiens (man)  
C:Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004  
C:Accession: A35974; A61190  
R:Martin, F.H.; Suggs, S.V.; Langley, K.E.; Lu, H.S.; Ting, J.; Okino, K.H.; Morris, C.  
S, J.C.; Patel, A.C.; Fisher, E.F.; Erjavec, H.O.; Herrera, C.O.; Wypych, J.; Sachdev,  
Cell 63, 203-211, 1990  
A:Title: Primary structure and functional expression of rat and human stem cell factor  
A:Reference number: A35974; MUID:91004219; PMID:2208279  
A:Accession: A35974  
A:Molecule type: mRNA  
A:Residues: 1-273 <MAR>  
A:Cross-references: UNIPROT:P21583; UNIPARC:UPI000002D482; GB:M59864; NID:G337933; PIDN  
R:Anderson, D.M.; Williams, D.E.; Tushinski, R.; Gimpel, S.; Eisenman, J.; Cannizzaro, J.  
Cell Growth Differ. 2, 373-378, 1991  
A:Title: Alternate splicing of mRNAs encoding human mast cell growth factor and localiz  
A:Reference number: A61190; MUID:92127291; PMID:1724381  
A:Accession: A61190  
A:Status: nucleic acid sequence not shown; not compared with conceptual translation  
A:Molecule type: mRNA  
A:Residues: 1-273 <AND>  
A:Cross-references: UNIPARC:UPI000002D482  
C:Genetics:  
A:Gene: GDB:MGP  
A:Cross-references: GDB:128026; OMIM:184745  
A:Map position: 12q22-12q22  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: alternative splicing; extracellular protein; glycoprotein; transmembrane pr  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-273/Product: mast cell growth factor #status predicted <MCS>  
F:26-189/Product: (or 26-190) mast cell growth factor, soluble form #status predicted <  
F:215-237/Domain: transmembrane #status predicted <TM>  
F:90,97,118,145,195/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 97.1%; Score 1030; DB 2; Length 273;  
Best Local Similarity 99.5%; Pred. No. 4.2e-74;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYLQLLFFNPLVKTEGICRNKRVNNVNDVTKLVANLPKYMILKYVPG 60  
Db 1 MKKTQTWLTCTIYLQLLFFNPLVKTEGICRNKRVNNVNDVTKLVANLPKYMILKYVPG 60  
QY 61 MDVLPSCHWISWVQVLSLTLDDKFSNYSIIIDKLVNIVDDLVECKENSS 120  
Db 61 MDVLPSCHWISWVQVLSLTLDDKFSNYSIIIDKLVNIVDDLVECKENSS 120  
QY 121 KDLKSKFSKSPRLFTPTPEFFRIFNRSIDAFKDFVVASETSDCVSVSSTLSPKDSRVST 180  
Db 121 KDLKSKFSKSPRLFTPTPEFFRIFNRSIDAFKDFVVASETSDCVSVSSTLSPKDSRVST 180

```
Qy 181 KPFLPPVAASSLRNDSSSSNSK 203
Db 181 KPFLPPVAASSLRNDSSSSNSK 203

RESULT 2
146575
c-kit ligand - pig
C:Species: Sus scrofa domestica (domestic pig)
C>Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 09-Jul-2004
C:Accession: I46575
R:Zhang, Z.; Anthony, R.V.
Biol. Reprod. 50, 95-102, 1994
A>Title: Porcine stem cell factor/c-kit ligand: its molecular cloning and localization
A:Reference number: 146575; MUID:94146218; PMID:7508758
A:Accession: I46575
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-274 <ZHA>
A:Cross-references: UNIPROT:Q29030; UNIPARC:UPI0000135640; GB:I07786; NID:g164420; PIDN:
C:Superfamily: mouse mast cell growth factor

Query Match 84.8%; Score 899.5; DB 2; Length 274;
Best Local Similarity 86.3%; Pred. No. 8.5e-64;
Matches 176; Conservative 17; Mismatches 10; Indels 1; Gaps 1;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60

Qy 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIYVDDLVKVCENSS 120
Db 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIYVDDLVKVCENSHF 120

Qy 121 KDLKSKSPKSPRLPTPEEFRIFNRSIDAFKDF-VVASETSDCVVSTLSPKDSRSV 179
Db 121 ENVKSSKSPKSPRLPTPEEFRIFNRSIDAFKDF-VVASETSDCVVSTLSPKDSRSV 180

Qy 180 TKPFMLPPVAASSLRNDSSSSNSK 203
Db 181 TKPFMLPPVAASSLRNDSSSSNSK 204

RESULT 3
B61190
mast cell growth factor, short form precursor - human
N:Alternate names: kit ligand, short form; stem cell factor, short form
C:Species: Homo sapiens (man)
C>Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 09-Jul-2004
R:Anderson, D.M.; Williams, D.E.; Tushinski, R.; Gimpel, S.; Eisenman, J.; Cannizzaro, I.
Cell Growth Differ. 2, 373-378, 1991
A>Title: Alternate splicing of mRNAs encoding human mast cell growth factor and localized
A:Reference number: A61190; MUID:92172791; PMID:1724381
A:Accession: B61190
A>Status: nucleic acid sequence not shown; not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-245 <AND>
A:Cross-references: UNIPROT:P21583; UNIPARC:UPI000002B351
A:Comment: Alternative splicing produces this short form in which a predicted cleavage
C:Genetics:
A:Gene: GDB:MGF
A:Cross-references: GDB:128026; OMIM:184745
A:Map position: 12q22-12q22
C:Superfamily: mouse mast cell growth factor
C:Keywords: alternative splicing; glycoprotein; transmembrane protein
F:1-25/Domain: signal sequence #status predicted <SIG>
F:187-209/Domain: transmembrane #status predicted <TMN>
F:90,97,118,145/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 83.9%; Score 890; DB 2; Length 245;
Best Local Similarity 100.0%; Pred. No. 4.2e-63;
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Matches 173; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60

Qy 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIYVDDLVKVCENSS 120
Db 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIYVDDLVKVCENSS 120

Qy 121 KDLKSKSPKSPRLPTPEEFRIFNRSIDAFKDF-VVASETSDCVVSTLSPK 173
Db 121 KDLKSKSPKSPRLPTPEEFRIFNRSIDAFKDF-VVASETSDCVVSTLSPK 173

RESULT 4
S47571
stem cell factor, longer isoform - bovine
C:Species: Bos primigenius taurus (cattle)
C>Date: 27-Jan-1995 #sequence_revision 27-Jan-1995 #text_change 09-Jul-2004
C:Accession: S47571
R:Zhou, J.H.; Hikono, H.; Ohtaki, M.; Kubota, T.; Sakurai, M.
Biochim. Biophys. Acta 1223, 148-150, 1994
A>Title: Cloning and characterization of cDNAs encoding two normal isoforms of bovine st
A:Reference number: S47571; MUID:94339176; PMID:7520283
A:Accession: S47571
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-274 <ZHO>
A:Cross-references: UNIPROT:Q28132; UNIPARC:UPI0000135639; EMBL:D28934; NID:g538520; PII
C:Superfamily: mouse mast cell growth factor

Query Match 83.6%; Score 886.5; DB 2; Length 274;
Best Local Similarity 85.3%; Pred. No. 9.1e-63;
Matches 174; Conservative 16; Mismatches 13; Indels 1; Gaps 1;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60

Qy 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIYVDDLVKVCENSS 120
Db 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIYVDDLVKVCENSHS 120

Qy 121 KDLKSKSPKSPRLPTPEEFRIFNRSIDAFKDF-VVASETSDCVVSTLSPKDSRSV 179
Db 121 ENVKSSKSPKSPRLPTPEEFRIFNRSIDAFKDF-VVASETSDCVVSTLSPKDSRSV 180

Qy 180 TKPFMLPPVAASSLRNDSSSSNSK 203
Db 181 TKPFMLPPVAASSLRNDSSSSNSK 204

RESULT 5
S58313
stem cell factor precursor - sheep (fragment)
C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C>Date: 14-Jan-1996 #sequence_revision 01-Mar-1996 #text_change 09-Jul-2004
C:Accession: S58313
R:McInnes, C.J.; Logan, M.; Falconer, V.M.; Rawlins, P.; Huntly, J.; Haig, D.
submitted to the EMBL Data Library, August 1995
A>Description: Molecular cloning and biological activity of ovine stem cell factor.
A:Reference number: S58313
A:Accession: S58313
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-202 <MCI>
A:Cross-references: UNIPROT:P79368; UNIPARC:UPI000016C4E5; EMBL:Z50743; NID:g940807; PII
C:Superfamily: mouse mast cell growth factor

Query Match 83.5%; Score 885.5; DB 2; Length 202;
Best Local Similarity 86.1%; Pred. No. 7.4e-63;
Matches 174; Conservative 15; Mismatches 12; Indels 1; Gaps 1;
```

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Qy 1 MKKTQTWILTCIYLQQLLFPNLPVKTEGICRNRTVNNVDVTKLVANLPKQYMITLKYVPG 60
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 1 MKKTQTWITTCIYLQQLLFPNLPVHTQGICRNRTVDVVDVTKLVANLPKQYMITLKYVPG 60

Qy 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYVDDLVECKENSS 120
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYVDDLVECKEHSF 120

Qy 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDF-VVASETSDCVVSSSTLSPKDSRVSV 179
      ::|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 121 ENVKSSKSPRQRTPEKFGIFNKSIDAFKDLFIIVASTWSECVISSTSPKDSRVSV 180

Qy 180 TKPFMLPPVAASSLRNDSSSN 201
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 181 TKPFMLPPVAASSLRNDSSSN 202

RESULT 6
146929
stem cell factor - dog
C:Species: Canis lupus familiaris (dog)
C:Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change 09-Jul-2004
C:Accession: I46929
R:Shull, R.M.; Suggs, S.V.; Langley, K.E.; Okino, K.H.; Jacobsen, F.W.; Martin, F.H.
Exp. Hematol. 20, 1118-1124, 1992
A:Title: Canine stem cell factor (c-kit ligand) supports the survival of hematopoietic B
A:Reference number: I46929; MUID:93106145; PMID:1281786
A:Accession: I46929
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-274 <SHU>
A:Cross-references: UNIPROT:Q06220; UNIPARC:UPI000013563A; GB:S53329; NID:G262240; PIDN:
C:Superfamily: mouse mast cell growth factor

Query Match 81.3%; Score 862.5; DB 2; Length 274;
Best Local Similarity 84.8%; Pred. No. 7.1e-61;
Matches 173; Conservative 13; Mismatches 17; Indels 1; Gaps 1;

Qy 1 MKKTQTWILTCIYLQQLLFPNLPVKTEGICRNRTVNNVDVTKLVANLPKQYMITLKYVPG 60
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 1 MKKTQTWITTCIYLQQLLFPNLPVTKTGICGRRTVDVVDVTKLVANLPKQYMITLKYVPG 60

Qy 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYVDDLVECKENSS 120
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYVDDLVECTEGYSF 120

Qy 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDF-VVASETSDCVVSSSTLSPKDSRVSV 179
      ::|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 121 ENVKKAPKSPRLFTPEEFRIFNRSIDAFKDLFTVASKSECVVSSSTLSPDKDSRVSV 180

Qy 180 TKPFMLPPVAASSLRNDSSSN 203
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 181 TKPFMLPPVAASSLRNDSSSNRK 204

RESULT 7
B35974
stem cell factor protein precursor - rat (fragment)
C:Species: Rattus norvegicus (Norway rat)
C:Date: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change 09-Jul-2004
C:Accession: B35974; A39805
R:Martin, F.H.; Suggs, S.V.; Langley, K.E.; Lu, H.S.; Ting, J.; Okino, K.H.; Morris, C.F.
J. C.; Patel, A.C.; Fisher, E.F.; Erjavec, H.O.; Herrera, C.J.; Wypych, J.; Sachdev, R.
Cell 63, 203-211, 1990
A:Title: Primary structure and functional expression of rat and human stem cell factor I
A:Reference number: A35974; MUID:91004219; PMID:2208279
A:Accession: B35974
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-201 <MAR>
A:Cross-references: UNIPROT:P21581; UNIPARC:UPI0000144090; GB:M59966; NID:G206861; PIDN:
R/Lu, H.S.; Clogston, C.L.; Wypych, J.; Fauseet, P.R.; Lauren, S.; Mendiaz, E.A.; Zsebo,
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J. Biol. Chem. 266, 8102-8107, 1991
A:Title: Amino acid sequence and post-translational modification of stem cell factor iso
A:Reference number: A39805; MUID:91217037; PMID:1708771
A:Accession: A39805
A:Status: preliminary
A:Molecule type: protein
A:Residues: E, 27-190 <LUA>
A:Cross-references: UNIPARC:UPI000014F57C
C:Superfamily: mouse mast cell growth factor

Query Match 80.8%; Score 857; DB 2; Length 201;
Best Local Similarity 82.6%; Pred. No. 1.3e-60;
Matches 166; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

Qy 1 MKKTQTWILTCIYLQQLLFPNLPVKTEGICRNRTVNNVDVTKLVANLPKQYMITLKYVPG 60
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 1 MKKTQTWITTCIYLQQLLFPNLPVTKTQICRNPNVDVVDVTKLVANLPNDYMITLNYVAG 60

Qy 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYVDDLVECKENSS 120
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 61 MDVLPSCWLRDMVTHLSVSLTLLDKFSNISEGLSNYSIIDKLGKIVDDLVACNEENAP 120

Qy 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPKDSRVSV 180
      ::|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 121 KNVKSLSKPKTRFTPEEFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPKDSRVSV 180

Qy 181 KPFLMLPPVAASSLRNDSSSN 201
      |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 181 KPFLMLPPVAASSLRNDSSSN 201

RESULT 8
S65801
mast cell growth factor - mouse
N:Alternate names: hematopoietic growth factor KL; ligand steel factor; stem cell facto
C:Species: Mus musculus (house mouse)
C:Date: 28-Oct-1996 #sequence_revision 27-Feb-1997 #text_change 09-Jul-2004
C:Accession: S65801; A43751; A35976; A35977; A35972; A35975; A35973; I48768
R:Bedell, M.A.; Copeland, N.G.; Jenkins, N.A.
Genetics 142, 927-934, 1996
A:Title: Multiple pathways for Steel regulation suggested by genomic and sequence analy
A:Reference number: S65801; MUID:97002551; PMID:8849898
A:Accession: S65801
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-273 <BED>
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI0000028C9B; EMBL:U44725; NID:G1172215; PI
R/Huang, E.J.; Nocka, K.H.; Buck, J.; Besmer, P.
Mol. Biol. Cell 3, 349-362, 1992
A:Title: Differential expression and processing of two cell associated forms of the kit-
A:Reference number: A43751; MUID:92330001; PMID:1378327
A:Accession: A43751
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-214, 'L', 216-273 <HUA>
A:Cross-references: UNIPARC:UPI000014D0C1; GB:S40364; NID:G251668; PIDN:AAB22554.2; PID
R/Huang, E.; Nocka, K.; Beier, D.R.; Chu, T.Y.; Buck, J.; Lahm, H.W.; Wellner, D.; Leder
Cell 63, 225-233, 1990
A:Title: The hematopoietic growth factor KL is encoded by the Sl locus and is the ligan
A:Reference number: A35976; MUID:91004221; PMID:1698557
A:Accession: A35976
A:Status: preliminary; not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-206, 'S', 208-270 <HU2>
A:Cross-references: UNIPARC:UPI000017955D; GB:M38511
R/Anderson, D.M.; Lyman, S.D.; Baird, A.; Wignall, J.M.; Eisenman, J.; Rauch, C.; March,
Cell 63, 235-243, 1990
A:Title: Molecular cloning of mast cell growth factor, a hematopoietin that is active in
A:Reference number: A35977; MUID:91004223; PMID:1698558
A:Accession: A35977
A:Status: preliminary
A:Molecule type: mRNA
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A;Residues: 1-273 <AND>  
A;Cross-references: UNIPARC:UPI0000028C9B; GB:M57647; NID:g199151; PIDN:AAA39  
R;Copeland, N.G.; Gilbert, D.J.; Cho, B.C.; Donovan, P.J.; Jenkins, N.A.; Cosman, D.; An  
Cell 63, 175-183, 1990  
A;Title: Mast cell growth factor maps near the steel locus on mouse chromosome 10 and is  
A;Reference number: A35972; MUID:91004216; PMID:1698554  
A;Accession: A35972  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 26-53 <COP>  
A;Cross-references: UNIPARC:UPI000017955E; GB:M59912  
R;Zsebo, K.M.; Williams, D.A.; Geissler, E.N.; Broudy, V.C.; Martin, F.H.; Atkins, H.L.;  
Cattanach, B.M.; Galli, S.J.; Suggs, S.V.  
Cell 63, 213-224, 1990  
A;Title: Stem cell factor is encoded at the Sl locus of the mouse and is the ligand for  
A;Reference number: A35975; MUID:91004220; PMID:1698556  
A;Accession: A35975  
A;Molecule type: mRNA  
A;Residues: 1-201 <ZSE>  
A;Cross-references: UNIPARC:UPI000016D02D; GB:M59915; NID:g200935; PIDN:AAA40095.1; PID:  
R;Zsebo, K.M.; Wypych, J.; McNiece, I.K.; Lu, H.S.; Smith, K.A.; Karkare, S.B.; Sachdev,  
A.; Langley, K.E.  
Cell 63, 195-201, 1990  
A;Title: Identification, purification, and biological characterization of hematopoietic  
A;Reference number: A35973; MUID:91004218; PMID:2208278  
A;Accession: A35973  
A;Status: preliminary  
A;Molecule type: protein  
A;Residues: 27-29, 'R', 31-39 <ZS2>  
A;Cross-references: UNIPARC:UPI000017955F  
R;Brannan, C.I.; Bedell, M.A.; Resnick, J.L.; Eppig, J.J.; Handel, M.A.; Williams, D.E.;  
Genes Dev. 6, 1832-1842, 1992  
A;Title: Developmental abnormalities in Steel17H mice result from a splicing defect in c  
A;Reference number: A44071; MUID:93012940; PMID:1383087  
A;Accession: I48768  
A;Status: preliminary; translated from GB/EMBL/DBJ  
A;Molecule type: mRNA  
A;Residues: 1-206, 'S', 208-273 <RES>  
A;Cross-references: UNIPARC:UPI000016CA07; EMBL:X68989; NID:g395283; PIDN:CAA48778.1; PI  
C;Genetics:  
A;Gene: SLF  
A;Map position: 10  
C;Superfamily: mouse mast cell growth factor  
C;Keywords: extracellular protein; glycoprotein; transmembrane protein

Query Match 80.6%; Score 855; DB 2; Length 273;  
Best Local Similarity 82.3%; Pred. No. 2.8e-60;  
Matches 167; Conservative 16; Mismatches 20; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFPNPLVKTGECIRNRVTNNVKDITKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTQTWLTCTIYLQLLFPNPLVKTGECIRNRVTNNVKDITKLVANLPKDYMITLKYVAG 60

Qy 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIVDDLVKVCVKNSS 120  
Db 61 MDVLPSCWLRDMVQLSLTLLDKFNSISSEGLSNYSIIDKLVNIVDDLVLCMEENAP 120

Qy 121 KDLKSKSPKPEPLTPPEFFRIFNRSIDAFKDFVASETSDCVSVSTLSPEK 180  
Db 121 KNIKESPKRPETSPPEFFRIFNRSIDAFKDFVASETSDCVSVSTLSPEK 180

Qy 181 KPFMLPPVAASLRNDSSSNRK 203  
Db 181 KPFMLPPVAASLRNDSSSNRK 203

RESULT 9  
A37934  
mast cell growth factor precursor (version 2) - mouse  
N;Alternate names: KL-2 protein  
C;Species: Mus musculus (house mouse)  
C;Date: 26-Jul-1991 #sequence\_revision 26-Jul-1991 #text\_change 09-Jul-2004  
C;Accession: A37934; B43751

R;Flanagan, J.G.; Chan, D.C.; Leder, P.  
Cell 64, 1025-1035, 1991  
A;Title: Transmembrane form of the kit ligand growth factor is determined by alternative  
A;Reference number: A37934; MUID:91160046; PMID:1705866  
A;Accession: A37934  
A;Molecule type: mRNA  
A;Residues: 1-245 <FLA>  
A;Cross-references: UNIPROT:P20826; UNIPARC:UPI000002B352; GB:M64262  
R;Huang, E.J.; Nocka, K.H.; Buck, J.; Beemer, P.  
Mol. Biol. Cell 3, 349-362, 1992  
A;Title: Differential expression and processing of two cell associated forms of the kit-  
A;Reference number: A43751; MUID:92330001; PMID:1378327  
A;Accession: B43751  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-173, 'R', 175-186, 'L', 188-245 <HUA>  
A;Cross-references: UNIPARC:UPI0000179560; GB:S04534  
A;Note: the authors translated the codon TTG for residue 187 as Trp  
C;Superfamily: mouse mast cell growth factor

Query Match 67.4%; Score 715; DB 2; Length 245;  
Best Local Similarity 79.8%; Pred. No. 2.8e-49;  
Matches 138; Conservative 16; Mismatches 19; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFPNPLVKTGECIRNRVTNNVKDITKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTQTWLTCTIYLQLLFPNPLVKTGECIRNRVTNNVKDITKLVANLPKDYMITLKYVAG 60

Qy 61 MDVLPSCWISWVQVLSLTDLLDKFNSISSEGLSNYSIIDKLVNIVDDLVKVCVKNSS 120  
Db 61 MDVLPSCWLRDMVQLSLTLLDKFNSISSEGLSNYSIIDKLVNIVDDLVLCMEENAP 120

Qy 121 KDLKSKSPKPEPLTPPEFFRIFNRSIDAFKDFVASETSDCVSVSTLSPEK 173  
Db 121 KNIKESPKRPETSPPEFFRIFNRSIDAFKDFVASETSDCVSVSTLSPEK 173

RESULT 10  
S29052  
stem cell factor - human (fragments)  
C;Species: Homo sapiens (man)  
C;Date: 22-Nov-1993 #sequence\_revision 10-Nov-1995 #text\_change 09-Jul-2004  
A;Accession: S29052  
R;Lu, H.S.; Clogston, C.L.; Wypych, J.; Parker, V.P.; Lee, T.D.; Swiderek, K.; Baltera J  
; Langley, K.E.  
Arch. Biochem. Biophys. 298, 150-158, 1992  
A;Title: Post-translational processing of membrane-associated recombinant human stem cel  
A;Reference number: S29052; MUID:92398336; PMID:1381905  
A;Accession: S29052  
A;Status: preliminary  
A;Molecule type: protein  
A;Residues: 1-13;14-30;31-46;47-59;60-86;87-95;96-107;108-124 <LUH>  
A;Cross-references: UNIPROT:Q7M4N8; UNIPARC:UPI0000179563; UNIPARC:UPI0000179564; UNIPAR  
IPARC:UPI000017956A  
C;Superfamily: mouse mast cell growth factor

Query Match 54.3%; Score 576.5; DB 2; Length 124;  
Best Local Similarity 75.2%; Pred. No. 1e-38;  
Matches 124; Conservative 0; Mismatches 0; Indels 41; Gaps 4;

Qy 26 EGICNRRVTNNVKDITKLVANLPKDYMITLKYVQGMVDVLPSCWISWVQVLSLTDLL 85  
Db 1 EGICNRRVTNNVK-----DVLPSHCWISWVQVLS-----30

Qy 86 DKFNSISSEGLSNYSIIDKLVNIVDDLVKVCVKNSSKDLKSKSPKPEPLTPPEFFRIFN 145  
Db 31 DKFNSISSEGLSNYSII-----DDLVECVKENSSEGLSKSPKPEPLTPPEFFRIFN 83

Qy 146 RSIDAFKDFVASETSDCVSVSTLSPEKDSRVSVTKPFMLPPVAA 190  
Db 84 RSI-----DFVASETSDCVSVSTLSPEKDSRVSVTKPFMLPPVAA 124



## RESULT 11

S70366  
stem cell factor long form precursor - quail  
C:Species: Coturnix coturnix (quail)  
C>Date: 06-Dec-1996 #sequence\_revision 25-Apr-1997 #text\_change 21-Jul-2000  
C:Accession: S70366  
R:Petitte, J.N.; Kulik, M.J.  
Biochim. Biophys. Acta 1307, 149-151, 1996  
A:Title: Cloning and characterization of cDNAs encoding two forms of avian stem cell factor  
A:Reference number: S70366; MUID:96283808; PMID:8679698  
A:Accession: S70366  
A:Molecule type: mRNA  
A:Residues: 1-287 <PET>  
A:Cross-references: UNIPARC:UPI000013563D; EMBL:U43078; NID:g1150875; PIDN:AAC59933.1; F  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-287/Product: stem cell factor long form #status predicted <MAT>  
F:226-250/Domain: transmembrane #status predicted <TM>

Query Match 53.8%; Score 570.5; DB 2; Length 287;  
Best Local Similarity 55.1%; Pred. No. 8.8e-38;  
Matches 114; Conservative 37; Mismatches 51; Indels 5; Gaps 3;

Qy 1 MKKTQTWLTCTYLLQLLFNPLVKTGICRRNRTNNVNDVKLVANLPKDYMITLKYVPG 60  
Db 1 MKKAQTWITTCFCLQLLNPLVKTQSSCGNPVTDVNDIAKLVGNLPNDVLTILKYVPK 60  
Qy 61 MDVLPSCWISWMMVQVLSLTDLLDKF---SNISEGLSNYSIIDKLVNIVDDLVECVKE 117  
Db 61 MDLSPNHCWHLWVPEFSRSLHNLQKFPVDSMDSVLSNYSIINNLRIINDLMACLAF 120  
Qy 118 NSSKD-LKSKFKSPPEPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSTL-SPEKDS 175  
Db 121 DKNKDFIKENGHLYEEDRFIPENFRFNRTIEVYKEPADSLDKNDKIMPSTVETPENDS 180  
Qy 176 RVSVTKPMLPPVAAASSLRNDSSSNS 202  
Db 181 RVAVTKTISFPFVAAASSLRNDSIGSNT 207

## RESULT 12

JN0637  
stem cell factor precursor - chicken  
C:Species: Gallus gallus (chicken)  
C>Date: 24-Feb-1994 #sequence\_revision 24-Feb-1994 #text\_change 09-Jul-2004  
C:Accession: JN0637  
R:Zhou, J.H.; Ohtaki, M.; Sakurai, M.  
Gene 127, 269-270, 1993  
A:Title: Sequence of a cDNA encoding chicken stem cell factor.  
A:Reference number: JN0637; MUID:93273244; PMID:7684722  
A:Accession: JN0637  
A:Molecule type: mRNA  
A:Residues: 1-287 <ZHO>  
A:Cross-references: UNIPROT:Q09108; UNIPARC:UPI000013563C; GB:D13516; NID:g391648; PIDN:  
A:Experimental source: brain  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-287/Product: stem cell factor #status predicted <MAT>  
F:226-248/Domain: transmembrane #status predicted <TM>

Query Match 53.0%; Score 562.5; DB 2; Length 287;  
Best Local Similarity 54.6%; Pred. No. 3.8e-37;  
Matches 113; Conservative 36; Mismatches 53; Indels 5; Gaps 3;

Qy 1 MKKTQTWLTCTYLLQLLFNPLVKTGICRRNRTNNVNDVKLVANLPKDYMITLKYVPG 60  
Db 1 MKKAQTWITTCFCLQLLNPLVKAQSSCGNPVTDVNDIAKLVGNLPNDVLTILKYVPK 60  
Qy 61 MDVLPSCWISWMMVQVLSLTDLLDKFSNI---SEGLSNYSIIDKLVNIVDDLVECVKE 117  
Db 61 MDLSPNHCWHLWVPEFSRSLHNLQKFPVDSMDSVLSNYSIINNLRIINDLMACLAF 120

Qy 118 NSSKD-LKSKFKSPPEPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSTL-SPEKDS 175  
Db 121 DKNKDFIKENGHLYEEDRFIPENFRFNRTIEVYKEPADSLDKNDKIMPSTVETPENDS 180  
Qy 176 RVSVTKPMLPPVAAASSLRNDSSSNS 202  
Db 181 RVAVTKTISFPFVAAASSLRNDSIGSNT 207

## RESULT 13

S70367  
stem cell factor short form precursor - quail  
C:Species: Coturnix coturnix (quail)  
C>Date: 06-Dec-1996 #sequence\_revision 25-Apr-1997 #text\_change 21-Jul-2000  
C:Accession: S70367  
R:Petitte, J.N.; Kulik, M.J.  
Biochim. Biophys. Acta 1307, 149-151, 1996  
A:Title: Cloning and characterization of cDNAs encoding two forms of avian stem cell factor  
A:Reference number: S70366; MUID:96283808; PMID:8679698  
A:Accession: S70367  
A:Molecule type: mRNA  
A:Residues: 1-253 <PET>  
A:Cross-references: UNIPARC:UPI000002B34F; EMBL:U43079; NID:g1150877; PIDN:AAC59934.1; F  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-253/Product: stem cell factor short form #status predicted <MAT>  
F:192-216/Domain: transmembrane #status predicted <TM>

Query Match 45.2%; Score 479.5; DB 2; Length 253;  
Best Local Similarity 46.9%; Pred. No. 1.2e-30;  
Matches 100; Conservative 42; Mismatches 58; Indels 13; Gaps 4;

Qy 1 MKKTQTWLTCTYLLQLLFNPLVKTGICRRNRTNNVNDVKLVANLPKDYMITLKYVPG 60  
Db 1 MKKAQTWITTCFCLQLLNPLVKTQSSCGNPVTDVNDIAKLVGNLPNDVLTILKYVPK 60  
Qy 61 MDVLPSCWISWMMVQVLSLTDLLDKF---SNISEGLSNYSIIDKLVNIVDDLVECVKE 117  
Db 61 MDLSPNHCWHLWVPEFSRSLHNLQKFPVDSMDSVLSNYSIINNLRIINDLMACLAF 120  
Qy 118 NSSKD-LKSKFKSPPEPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSTL-SPEKDS 175  
Db 121 DKNKDFIKENGHLYEEDRFIPENFRFNRTIEVYKEPADSLDKNDKIMPSTVETPENDS 180  
Qy 176 RVSVTKPMLPPVAAASSLRNDSSSNSKYIYLI 208  
Db 181 ALGF-----ISSSLQGISIALTSLLSLLI 205

## RESULT 14

B35971  
mast cell growth factor - mouse (fragment)  
C:Species: Mus musculus (house mouse)  
C>Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004  
C:Accession: B35971  
R:Williams, D.E.; Eisenman, J.; Baird, A.; Rauch, C.; Van Ness, K.; March, C.J.; Park, J.  
Cell 63, 167-174, 1990  
A:Title: Identification of a ligand for the c-kit proto-oncogene.  
A:Reference number: A35971; MUID:91004215; PMID:1698553  
A:Accession: B35971  
A>Status: preliminary  
A:Molecule type: protein  
A:Residues: 1-51 <WIL>  
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI00000179562  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: transmembrane protein

Query Match 16.5%; Score 175.5; DB 2; Length 51;  
Best Local Similarity 72.3%; Pred. No. 1.6e-07;  
Matches 34; Conservative 5; Mismatches 7; Indels 1; Gaps 1;

Qy 28 ICRNRVTNNVDVTKLVANLPKDYMITLKYVPGMDVLPSCWISMVVQ 74  
 Db 3 ICGNPVTNDVNDITTKLVANLPNDYMITLNYVAGMDVLPF--WWLDDMI 48

RESULT 15

A35971  
 mast cell growth factor - mouse (fragment)  
 C:Species: Mus musculus (house mouse)  
 C:Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004  
 C:Accession: A35971  
 R:Williams, D.E.; Eisenman, J.; Baird, A.; Rauch, C.; Van Ness, K.; March, C.J.; Park, I.  
 Cell 63, 167-174, 1990  
 A:Title: Identification of a ligand for the c-kit proto-oncogene.  
 A:Reference number: A35971; MUID:91004215; PMID:1698553  
 A:Accession: A35971  
 A:Status: preliminary  
 A:Molecule type: protein  
 A:Residues: 1-49 <WIL>  
 A:Cross-references: UNIPROT:P20826; UNIPARC:UPI0000179561  
 C:Superfamily: mouse mast cell growth factor  
 C:Keywords: transmembrane protein

Query Match 16.3%; Score 172.5; DB 2; Length 49;  
 Best Local Similarity 73.5%; Pred. No. 2.6e-07;  
 Matches 36; Conservative 4; Mismatches 6; Indels 3; Gaps 2;

Qy 28 ICRNRVTNNVDVTKLVANLPKDYMITLKYVPGMDVLPSCWISMVVQ 76  
 Db 3 ICGNPVTNDVNDITTKLVANLPNDYMITLNYVAGMDVLPF--WY-DWVIQ 48

Search completed: February 22, 2006, 18:20:26  
 Job time : 19.1901 secs

GenCore version 5.1.7  
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OM protein - protein search, using sw model

Run on: February 22, 2006, 18:05:51 ; Search time 107.152 Seconds  
(without alignments)  
1369.555 Million cell updates/sec

Title: US-10-620-642-46  
Perfect score: 1061  
Sequence: 1 MKKTQTWLTCTIYQLLFFN.....AASSLRNDSSSSNKIYLI 208

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : UniProt\_05.80.\*  
1: uniprot\_spot.\*  
2: uniprot\_trembl.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1030	97.1	273	1 SCF HUMAN	P21583 homo sapien
2	908.5	85.6	274	1 SCF FELCA	P79169 felis silve
3	899.5	84.8	274	1 SCF PTG	Q29030 sus scrofa
4	898.5	84.7	274	1 SCF HORSE	Q95md2 equus cabal
5	890	83.9	245	2 Q85Z4 9PRIM	Q85Z4 papio cynoc
6	889.5	83.8	267	1 SCF SHEEP	P79368 ovis aries
7	886.5	83.6	274	1 SCF BOVIN	Q28132 bos taurus
8	885.5	83.5	274	1 SCF CAPHI	Q95ml9 capra hircu
9	862.5	81.3	274	1 SCF CANFA	Q06220 canis fami
10	861	81.1	273	1 SCF RAT	P21581 rattus norv
11	859.5	81.0	274	1 SCF MUSVI	Q95n18 mustela vis
12	855	80.6	208	2 Q64384 9MURI	Q64384 mus sp. c-k
13	855	80.6	208	2 Q78ED8 MOUSE	P798ed8 mus musculu
14	855	80.6	273	1 SCF MOUSE	P20826 mus musculu
15	835	78.7	164	2 Q84L9 MACMU	Q84L9 macaca mula
16	804	75.8	238	2 Q68D22 HUMAN	Q68d22 homo sapien
17	721	68.0	245	2 Q5A14 RAT	Q5A14 rattus norv
18	576.5	54.3	124	2 Q7M4N8 HUMAN	Q7M4n8 homo sapien
19	570.5	53.8	287	1 SCF COTJA	Q90314 coturnix co
20	562.5	53.0	287	1 SCF CHICK	Q09108 gallus gall
21	509	48.0	123	2 Q61854 MOUSE	Q61854 mus musculu
22	480	45.2	160	2 Q8C9K1 MOUSE	Q8C9k1 mus musculu
23	327	30.8	271	2 Q9TGP2 ARHME	Q9Tgp2 ambystoma m
24	299.5	28.2	270	2 Q7ZXV0 XENLA	Q7zxv0 xenopus lae
25	273.5	25.8	270	2 Q8AYN7 XENLA	Q8ayn7 xenopus lae
26	270.5	25.5	270	2 Q6DTW3 XENLA	Q6dtw3 xenopus lae
27	184	17.3	272	2 Q56JH6 BRARE	Q56jh6 brachydanio
28	149	14.0	234	2 Q541A5 TETNG	Q541a5 tetraodon n
29	124	11.7	267	2 Q56JH5 BRARE	Q56jh5 brachydanio
30	116.5	11.0	1697	2 Q81FM4 PLAF7	Q81fm4 plasmodium
31	116.5	11.0	1711	2 Q8MWP2 PLAPA	Q8mwp2 plasmodium

32	116.5	11.0	1713	2	Q8MWP1 PLAPA	Q8mwp1 plasmodium
33	116.5	11.0	1716	2	Q8MWH2 PLAPA	Q8mwh2 plasmodium
34	106.5	10.0	1665	2	Q6YA77 PLARE	Q6ya77 plasmodium
35	100	9.4	3072	2	Q92645 CYVV	Q92645 clover yell
36	99	9.3	1011	2	Q6FLY9 CANGA	Q6fly9 candida gla
37	97.5	9.2	880	2	Q54UK3 DICDI	Q54uk3 dictyosteli
38	97.5	9.2	1490	2	Q19545 CABEL	Q19545 caenorhabdi
39	97	9.1	373	2	Q75F78 ASHGO	Q75f78 ashbya goss
40	97	9.1	1447	2	Q9PQJ8 UREPA	Q9pqj8 ureaplasma
41	96.5	9.1	1498	2	Q96VK6 EMENI	Q96vk6 emericella
42	96.5	9.1	1498	2	Q9P884 EMENI	Q9p884 emericella
43	96	9.0	1039	1	SCA4 RICE	Q9a137 rickettsia
44	95	9.0	251	2	Q87M34 VIBPA	Q87m34 vibrio para
45	95	9.0	653	2	Q6FV48 CANGA	Q6fv48 candida gla

#### ALIGNMENTS

RESULT 1  
ID SCF\_HUMAN STANDARD; PRT; 273 AA.  
AC P21583; Q16487; Q9UOK7;  
DT 01-MAY-1991 (Rel. 18, Created)  
DT 01-MAY-1991 (Rel. 18, Last sequence update)  
DE 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast  
DE cell growth factor) (MGF).  
GN Name=KITLG; Synonyms=MGF, SCF;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;  
OC Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
RX MEDLINE=91004219; PubMed=2208279; DOI=10.1016/0092-8674(90)90301-T;  
RA Martin F.H., Suggs S.V., Langley K.E., Lu H.S., Ting J., Okino K.H.,  
RA Morris C.F., McNiece I.K., Jacobsen F.W., Mendiaz E.A., Birkett N.C.,  
RA Smith K.A., Johnson M.J., Parker V.P., Flores J.C., Patel A.C.,  
RA Fisher E.P., Erijavec H.O., Herrera C.J., Wypych J., Sachdev R.K.,  
RA Pope J.A., Leslie I., Wen D., Lin C.-H., Cupples R.L., Zeebo K.M.;  
RT "Primary structure and functional expression of rat and human stem  
RT cell factor DNAs.";  
RL Cell 63:203-211(1990).  
RN [2]  
RP NUCLEOTIDE SEQUENCE (ISOFORM 2).  
RX PubMed=1724381; Williams D.E., Tushinski R., Gimpel S., Eisenman J.,  
RA Anderson D.M., Williams D.E., Tushinski R., Gimpel S., Eisenman J.,  
RA Cannizzaro L.A., Aronson M., Croce C.M., Huebner K., Cosman D.;  
RT "Alternate splicing of mRNAs encoding human mast cell growth factor  
RT and localization of the gene to chromosome 12q22-q24.";  
RL Cell Growth Differ. 2:373-378(1991).  
RN [3]  
RP NUCLEOTIDE SEQUENCE (ISOFORM 2).  
RX MEDLINE=91160429; PubMed=10049787; DOI=10.1006/bbrc.1999.0260;  
RA Blair H.C., Julian B.A., Cao X., Jordan S.E., Dong S.S.;  
RT "Parathyroid hormone-regulated production of stem cell factor in human  
RT osteoblasts and osteoblast-like cells.";  
RL Biochem. Biophys. Res. Commun. 255:778-784(1999).  
RN [4]  
RP NUCLEOTIDE SEQUENCE.  
RA Han C., Peng X., Yuan J., Qiang B.;  
RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.  
RN [5]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RX MEDLINE=2388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
RA Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,  
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Rulyk S.W.,  
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahy J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,  
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalilus D.E.,  
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,  
RT 'Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences.';  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RW [6]  
RP NUCLEOTIDE SEQUENCE OF 167-248 (ISOFORM 2).  
RX MEDLINE=92360843; PubMed=1379846;  
RA Toyota M., Hinoda Y., Itoh P., Tsujieaki M., Imai K., Yachi A.,  
RA "Expression of two types of kit ligand mRNAs in human tumor cells.";  
RT Int. J. Hematol. 55:301-304(1992).  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediates also  
CC cell-cell adhesion. Acts synergistically with other cytokines,  
CC probably interleukins.  
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).  
CC Also exists as a secreted soluble form (isoform 1 only) (By  
CC similarity).  
CC -!- ALTERNATIVE PRODUCTS:  
CC Event-Alternative splicing; Named isoforms=2;  
CC Name=1; Synonyms=SCF248;  
CC IsoId=P21583-1; Sequences=Displayed;  
CC Name=2; Synonyms=SCF220;  
CC IsoId=P21583-2; Sequences=VSP 006022;  
CC -!- DEVELOPMENTAL STAGE: Acts in the early stages of hematopoiesis.  
CC -!- PTM: A soluble form is produced by proteolytic processing of  
CC isoform 1 in the extracellular domain.  
CC -!- SIMILARITY: Belongs to the SCF family.  
CC -!- DATABASE: NAME=Atlas Genet. Cytogenet. Oncol. Haematol.;  
CC WWW="http://www.infobiogen.fr/services/chronocancer/Genes/MGFI142.html".  
CC -----  
CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
CC the European Bioinformatics Institute. There are no restrictions on its  
CC use as long as its content is in no way modified and this statement is not  
CC removed.  
CC -----  
CC EMBL; M59964; AAR85450.1; -; mRNA.  
CC EMBL; AF119835; RAD22048.1; -; mRNA.  
CC EMBL; AF400436; AAK92485.1; -; mRNA.  
CC EMBL; AF400437; AAK92486.1; -; mRNA.  
CC EMBL; BC069733; AAH69733.1; -; mRNA.  
CC EMBL; BC069783; AAH69783.1; -; mRNA.  
CC EMBL; BC069797; AAH69797.1; -; mRNA.  
CC EMBL; BC074725; AAH74725.1; -; mRNA.  
CC EMBL; S42571; AAB22846.2; -; mRNA.  
CC PIR; A35974; A35974.  
CC PIR; B61190; B61190.  
CC PDB; 1EXZ; X-ray; A/B/C/D=26-166.  
CC PDB; 1SCF; X-ray; A/B/C/D=1-273.  
CC Ensemble; ENSG00000049130; Homo sapiens.  
CC HGNC; HGNC:6343; KITLG.  
CC MIM; 184745; -.  
CC GO; GO:0005886; C:plasma membrane; NAS.  
CC GO; GO:0005173; P:stem cell factor receptor binding; NAS.  
CC GO; GO:0008283; P:cell proliferation; TAS.  
CC GO; GO:0030097; P:nemopoiesis; NAS.  
CC GO; GO:0007165; P:signal transduction; TAS.  
CC InterPro; IPR012351; Cytokine\_4\_hlx.  
CC InterPro; IPR003452; SCF.  
CC PANTHER; PTHR11574; SCF; 1.  
CC Pfam; PF02404; SCF; 1.

KW 3D-structure; Alternative splicing; Cell adhesion; Glycoprotein;  
KW Growth factor; Signal; Transmembrane.  
FT SIGNAL 1 25 Kit ligand.  
FT CHAIN 26 273 Extracellular (Potential).  
FT TOPO DOM 26 214 Potential.  
FT TRANSMEM 215 237  
FT TOPO DOM 238 273 Cytoplasmic (Potential).  
FT CARBOHYD 90 90 N-linked (GlcNAc...) (Potential).  
FT CARBOHYD 97 97 N-linked (GlcNAc...) (Potential).  
FT CARBOHYD 118 145 N-linked (GlcNAc...) (Potential).  
FT CARBOHYD 145 195 N-linked (GlcNAc...) (Potential).  
FT CARBOHYD 195 195 N-linked (GlcNAc...) (Potential).  
FT DISULFID 29 114 By similarity.  
FT DISULFID 68 163 By similarity.  
FT VARSP LIC 174 202 DSRVSVTFKFMFLPPVVAASLRNDSSSSNR -> G (in  
FT isoform 2).  
FT /FTid=VSP\_006022.  
FT L -> S (in Ref. 3 and 4; AAK92486).  
FT K -> R (in Ref. 3 and 4; AAK92486).  
FT L -> F (in Ref. 3 and 4; AAK92486).  
SQ SEQUENCE 273 AA; 30899 MW; 19PD362CB59C6607 CRC64;  
Query Match 97.1%; Score 1030; DB 1; Length 273;  
Best Local Similarity 99.5%; Pred. NO. 2.2e-71;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTYLLQLLFLNPLVTEGICRRVTVNNVNDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTYLLQLLFLNPLVTEGICRRVTVNNVNDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWMVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIYVDDLVCEVKENSS 120  
DB 61 MDVLPSCWISWMVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIYVDDLVCEVKENSS 120  
QY 121 KDLKSKFSKPPRLFTPEEFRIFNRSIDAFKDFVASETSDCVSVSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSKPPRLFTPEEFRIFNRSIDAFKDFVASETSDCVSVSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVVAASLRNDSSSSNSK 203  
DB 181 KPFMLPPVVAASLRNDSSSSNRK 203  
RESULT 2  
SCF\_FELCA STANDARD; PRT; 274 AA.  
ID SCF\_FELCA AC P79169;  
DT 28-FEB-2003 (Rel. 41, Created)  
DT 28-FEB-2003 (Rel. 41, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast  
DE cell growth factor) (MGF).  
GN Name=KITLG; Synonyms=SCF;  
OS Felis silvestris catus (Cat).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Felidae;  
OC Felinae; Felis.  
OC NCBI\_TaxID=9685;  
RN [1]  
RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
RX MEDLINE=97069946; PubMed=8912926;  
RA Dunham S.P., Onions D.E.;  
RT "The cloning and sequencing of cDNAs encoding two isoforms of feline  
RT stem cell factor.";  
RL DNA Seq. 6:233-237(1996).  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediates also  
CC cell-cell adhesion. Acts synergistically with other cytokines,  
CC probably interleukins (by similarity).  
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).  
CC Also exists as a secreted soluble form (isoform 1 only) (By

```
CC similarity).
CC -! ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=P79169-1; Sequence=Displayed;
CC Name=2;
CC IsoId=P79169-2; Sequence=VSP_006021;
CC -! PTM: A soluble form is produced by proteolytic processing of
CC isoform 1 in the extracellular domain (By similarity).
CC -! SIMILARITY: Belongs to the SCF family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; D50833; BAA09445.1; -; mRNA.
CC SMR; P79169; 29-161.
CC InterPro; IPR012351; Cytokine_4_hlx.
CC PANTHER; PTHR11574; SCF; 1.
CC Pfam; PF02404; SCF; 1.
CC Alternative splicing; Cell adhesion; Glycoprotein; Growth factor;
CC Signal; Transmembrane.
CC SIGNAL 1 25
CC CHAIN 26 274
CC TOPO_DOM 26 215
CC TRANSMEM 216 238
CC TOPO_DOM 239 274
CC CARBOHYD 90 90
CC CARBOHYD 97 97
CC CARBOHYD 145 145
CC CARBOHYD 196 196
CC DISULFID 29 114
CC DISULFID 68 164
CC VARSPPLIC 175 203
CC -----
CC SEQUENCE 274 AA; 30988 MW; C5B78DB4791237BE CRC64;
Query Match 85.6%; Score 908.5; DB 1; Length 274;
Best Local Similarity 88.2%; Pred. No. 5.2e-62;
Matches 180; Conservative 13; Mismatches 10; Indels 1; Gaps 1;
QY 1 MKKTQTVILTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTVILTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPSCWISWVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIVDDLVECVKENS 120
Db 61 MDVLPSCWISWVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIVDDLVECVKENS 120
QY 121 KDLKSKFSPKPEPLPTPEFFRIFNRSIDAFKDPF-VVASETSDCVSVSTLSPKDSRSV 179
Db 121 ENVKKSKSPKPEPLPTPEFFRIFNRSIDAFKDPF-VVASETSDCVSVSTLSPKDSRSV 180
QY 180 TKPFMLPPVAASSLRNDSSSSNSK 203
Db 181 TKPFMLPPVAASSLRNDSSSSNSK 204
RESULT 3
SCF_PIG
ID SCF_PIG STANDARD; PRT; 274 AA.
AC Q29030;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
DE cell growth factor) (MGF).
OS Name=KITLG; Synonyms=MGF;
OS Sub scrofa (Pig).
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OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sub.
OX NCBI_TaxID=9823;
RN [1]_TaxID=9823;
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Uterus;
RX MEDLINE=94146218; PubMed=7508758;
RA Zhang Z., Anthony R.V.;
RT "Porcine stem cell factor/c-kit ligand: its molecular cloning and
RT localization within the uterus.";
RL Biol. Reprod. 50:95-102(1994).
CC -! FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -! SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -! SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -! PTM: A soluble form is produced by proteolytic processing of the
CC extracellular domain (By similarity).
CC -! SIMILARITY: Belongs to the SCF family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; L07786; AAA53670.1; -; mRNA.
CC PIR; I46575; I46575.
CC SMR; Q29030; 29-161.
CC InterPro; IPR012351; Cytokine_4_hlx.
CC InterPro; IPR003452; SCF.
CC PANTHER; PTHR11574; SCF; 1.
CC Pfam; PF02404; SCF; 1.
CC Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
CC SIGNAL 1 25
CC CHAIN 26 274
CC TOPO_DOM 26 215
CC TRANSMEM 216 238
CC TOPO_DOM 239 274
CC CARBOHYD 90 90
CC CARBOHYD 97 97
CC CARBOHYD 145 145
CC CARBOHYD 196 196
CC DISULFID 29 114
CC DISULFID 68 164
CC SEQUENCE 274 AA; 31119 MW; PF3C87114D7BA6A6 CRC64;
Query Match 84.8%; Score 899.5; DB 1; Length 274;
Best Local Similarity 86.3%; Pred. No. 2.6e-61;
Matches 176; Conservative 17; Mismatches 10; Indels 1; Gaps 1;
QY 1 MKKTQTVILTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTVILTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPSCWISWVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIVDDLVECVKENS 120
Db 61 MDVLPSCWISWVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIVDDLVECVKENS 120
QY 121 KDLKSKFSPKPEPLPTPEFFRIFNRSIDAFKDPF-VVASETSDCVSVSTLSPKDSRSV 179
Db 121 ENVKKSKSPKPEPLPTPEFFRIFNRSIDAFKDPF-VVASETSDCVSVSTLSPKDSRSV 180
QY 180 TKPFMLPPVAASSLRNDSSSSNSK 203
Db 181 TKPFMLPPVAASSLRNDSSSSNSK 204
RESULT 4
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SCF_HORSE
ID SCF_HORSE STANDARD; PRT: 274 AA.
AC Q95MD2; O62765; Q95MG7; Q95MG8; Q9N1Y5;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
cell growth factor) (MGF).
GN Name=KITLG; Synonyms=MGF, SCF;
OS Equus caballus (Horse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
OX NCBI_TaxID=9796;
RN [1]
RP NUCLEOTIDE SEQUENCE OF 4-264.
RA Terry R.R., Mickelson J.R., Schmutz S., Cothran E.G., Bailey E.;
RT "Equus caballus mast cell growth factor (MGF).";
RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
RN [2]
RP NUCLEOTIDE SEQUENCE OF 12-267.
RC TISSUE=Skin;
RA Rieder S., Checa-Cortes M.L., Joerg H., Stranzinger G.;
RT "An equine sequence homologous to stem cell factor (KIT-ligand).";
RL Submitted (MAR-1998) to the EMBL/GenBank/DBJ databases.
RN [3]
RP NUCLEOTIDE SEQUENCE OF 107-202 AND 227-274.
RA Terry R.R., Bailey E.F., Cothran E.G.;
RT "Evaluation of MGF as the candidate gene for Appaloosa spotting.";
RL Submitted (APR-2001) to the EMBL/GenBank/DBJ databases.
RN [4]
RP NUCLEOTIDE SEQUENCE OF 147-197.
RA Caetano A.R., Shue Y.-L., Lyons L.A., Laughlin T.F., O'Brien S.J.,
RA Murray J.D., Bowling A.T.;
RT "A primary Human-Horse comparative gene map.";
RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -!- PTM: A soluble form is produced by proteolytic processing of the
CC extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; AF401625; AAK94474.1; -; mRNA.
DR EMBL; AF053498; AAC97076.1; -; mRNA.
DR EMBL; AF367704; AAK63249.1; -; Genomic DNA.
DR EMBL; AF367706; AAK63250.1; -; Genomic DNA.
DR EMBL; AF130770; AAF36716.1; -; Genomic DNA.
DR SMR; Q95MD2; 29-161.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR003452; SCF.
DR Pfam; PF02404; SCF; 1.
DR PANTHER; PTHR11574; SCF; 1.
KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
FT SIGNAL 1 25
FT CHAIN 26 274
FT TOPO_DOM 26 215
FT TRANSMEM 216 238
FT TOPO_DOM 239 274
FT CARBOHYD 90 97
FT CARBOHYD 97 90
FT CARBOHYD 145 145
FT CARBOHYD 145 196
FT CARBOHYD 196 196

Query Match 84.7%; Score 898.5; DB 1; Length 274;
Best Local Similarity 86.8%; Pred. No. 3.1e-61; Indels 1; Gaps 1;
Matches 177; Conservative 15; Mismatches 11;

QY 1 MKKTQTWLTCTIYLQLLFLNPLVKTGICRRNVNNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYLQLLFLNPLVKTGICRRNVNNDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISWMVQVLSDSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVECKENSS 120
DB 61 MDVLPSCWISWMVQVLSDSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVECKENSS 120

QY 121 KDLKSKPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVSSTLSPEKDSRVSV 179
DB 121 KDLKSKPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVSSTLSPEKDSRVSV 179

QY 121 ENVKSKYSQSRSLFTPEEPFRIFNRSIDAFKDFVVMVSKTSECWVSSTLSPEKDSRVSV 180
DB 121 ENVKSKYSQSRSLFTPEEPFRIFNRSIDAFKDFVVMVSKTSECWVSSTLSPEKDSRVSV 180

QY 180 TKPFMLPVAASSLRNDSSSSNSK 203
DB 180 TKPFMLPVAASSLRNDSSSSNSK 204

QY 181 TKPFMLPVAASSLRNDSSSSNSK 204
DB 181 TKPFMLPVAASSLRNDSSSSNSK 204

RESULT 5
Q86524_9PRIM PRELIMINARY; PRT: 245 AA.
AC Q86524;
DT 01-JUN-2003 (TrEMBLrel. 24, Created)
DT 01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Stem cell factor.
OS Papio cynocephalus x Papio anubis.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopithecinae; Papio.
OX NCBI_TaxID=208510;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Kalina T., Storek J.;
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY226584; AAO72537.1; -; mRNA.
DR HSSP; P21583; 1EXZ.
DR SMR; Q86524; 29-161.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005173; F:stem cell factor receptor binding; IEA.
DR GO; GO:0007155; P:cell adhesion; IEA.
DR InterPro; IPR003452; SCF.
DR Pfam; PF02404; SCF; 1.
DR SEQUENCE 245 AA; 27887 MW; 937B3CAF28D694FA CRC64;

Query Match 83.9%; Score 930; DB 2; Length 245;
Best Local Similarity 100.0%; Pred. No. 1.2e-60; Indels 0; Gaps 0;
Matches 173; Conservative 0; Mismatches 0;

QY 1 MKKTQTWLTCTIYLQLLFLNPLVKTGICRRNVNNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYLQLLFLNPLVKTGICRRNVNNDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISWMVQVLSDSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVECKENSS 120
DB 61 MDVLPSCWISWMVQVLSDSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVECKENSS 120

QY 121 KDLKSKPKSPRLFTPEEPFRIFNRSIDAFKDFVVASETSDCVSSTLSPEK 173
DB 121 KDLKSKPKSPRLFTPEEPFRIFNRSIDAFKDFVVASETSDCVSSTLSPEK 173

RESULT 6

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SCF\_SHEEP STANDARD; PRT; 267 AA.

AC P79368; Q28591;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast cell growth factor) (MGF) (Fragment).  
 DE Name=KITLG; Synonyms=SCF;  
 OS Ovis aries (Sheep).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae; Caprinae; Ovis.  
 NCBI\_TaxID=9940;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE OF 8-267.  
 RC TISSUE=Ovarian follicle;  
 RX MEDLINE=96413880; PubMed=8662240; DOI=10.1007/s003359900142; Tisdall D.J., Quirke L.D., Galloway S.M.;  
 RA "Ovine stem cell factor gene is located within a syntenic group on chromosome 3 conserved across mammalian species."  
 RL Mamm. Genome 7:472-473(1996).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE OF 1-202.  
 RX MEDLINE=99463397; PubMed=10328863; DOI=10.1006/cyto.1998.0430; McInnes C.J., Deane D., Thomson J., Broad A., Haig D.M.;  
 RA "The cloning and expression of the cDNA for ovine stem cell factor (kit-ligand) and characterization of its in vitro haematopoietic activity."  
 RT Cytokine 11:249-256(1999).  
 RL  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to augment the proliferation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. Mediates also cell-cell adhesion. Acts synergistically with other cytokines, probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a secreted soluble form (By similarity).  
 CC -!- PTM: A soluble form is produced by proteolytic processing of the extracellular domain (By similarity).  
 CC -!- SIMILARITY: Belongs to the SCF family.  
 CC  
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 CC  
 CC EMBL; U89874; AAB49491.1; -; mRNA.  
 CC EMBL; Z50743; CAA30620.1; -; mRNA.  
 CC PIR; S58313; S58313.  
 CC SMR; P79368; 29-161.  
 CC InterPro; IPR012351; Cytokine\_4\_hlx.  
 CC InterPro; IPR003452; SCF.  
 CC PANTHER; PTHR11574; SCF; 1.  
 CC Pfam; PF02404; SCF; 1.  
 CC Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
 KW SIGNAL 1 25 Potential.  
 FT CHAIN 26 >267 Kit ligand.  
 FT TOPO\_DOM 26 215 Extracellular (Potential).  
 FT TRANSMEM 216 238 Potential.  
 FT TOPO\_DOM 239 >267 Cytoplasmic (Potential).  
 FT CARBOHYD 90 97 N-linked (GlcNAc...) (Potential).  
 FT CARBOHYD 97 97 N-linked (GlcNAc...) (Potential).  
 FT CARBOHYD 145 145 N-linked (GlcNAc...) (Potential).  
 FT CARBOHYD 196 196 By similarity.  
 FT DISULFID 29 114 By similarity.  
 FT DISULFID 68 164 By similarity.  
 FT NON\_TER 267 267  
 SQ SEQUENCE 267 AA; 30149 MW; 9D9D959E4B9EC841 CRC64;

Query Match 83.8%; Score 889.5; DB 1; Length 267;  
 Best Local Similarity 85.8%; Pred. No. 1.5e-60;

Matches 175; Conservative 15; Mismatches 13; Indels 1; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLLNFPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKVPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLNFPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKVPG 60  
 QY 61 MDVLPCHWCISEMVQVLSLTDLKFSNISGLSNYSIIDKLWNIVDDLVKVCNKSS 120  
 DB 61 MDVLPCHWCISEMVQVLSLTDLKFSNISGLSNYSIIDKLWNIVDDLVKVCNKSS 120  
 QY 121 KDLKFSKSPKPEPLFTPEFFRIFNRSIDAFKDF-VVASETSQCVVSSITLSPKDSVSV 179  
 DB 121 ENVKSSKSPKPEPQFTPEFFRIFNRSIDAFKDFLEIVASTMECVISSTSSPKDSVSV 180  
 QY 180 TKPFMLPPVAASLRNDSSSSNSK 203  
 DB 181 TKPFMLPPVAASLRNDSSSSNRK 204

RESULT 7  
 SCF\_BOVIN STANDARD; PRT; 274 AA.  
 AC Q28132; Q9TU74;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast cell growth factor) (MGF).  
 DE Name=KITLG; Synonyms=SCF;  
 OS Bos taurus (Bovine).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae; Bovinae; Bos.  
 NCBI\_TaxID=9913;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
 RC TISSUE=Spleen;  
 RX MEDLINE=94339176; PubMed=7520283; DOI=10.1016/0167-4889(94)90084-1; Zhou J., Hikono H., Ohtaki M., Kubota T., Sakurai M.;  
 RT "Cloning and characterization of cDNAs encoding two normal isoforms of bovine stem cell factor."  
 RL Biochim. Biophys. Acta 1223:148-150(1994).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RC TISSUE=Fetal brain;  
 RA Kudo T.;  
 RT "Bovine counterpart of stem cell factor."  
 RL Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE OF 204-239, AND VARIANT ASP-218.  
 RX STRAIN=Belgian Blue;  
 RX MEDLINE=99315331; PubMed=10384045; DOI=10.1007/s003359901076; Seitz J.J., Schmutz S.M., Thue T.D., Buchanan F.C.;  
 RA "A missense mutation in the bovine MGF gene is associated with the roan phenotype in Belgian Blue and Shorthorn cattle."  
 RL Mamm. Genome 10:710-712(1999).  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to augment the proliferation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. Mediates also cell-cell adhesion. Acts synergistically with other cytokines, probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2). Also exists as a secreted soluble form (isoform 1 only) (By similarity).  
 CC -!- ALTERNATIVE PRODUCTS:  
 CC Event=Alternative splicing; Named isoforms=2;  
 CC Name=1;  
 CC IsoId=Q28132-1; Sequence=Displayed;  
 CC Name=2;  
 CC IsoId=Q28132-2; Sequence=VSP\_006020;  
 CC -!- PTM: A soluble form is produced by proteolytic processing of isoform 1 in the extracellular domain (By similarity).  
 CC

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CC -!- POLYMORPHISM: The roan locus is responsible for the coat
CC coloration of Belgian Blue and Shorthorn cattle. The solid-colored
CC and white animals are homozygotes, and the roan animals, with
CC intermingled colored and white hairs, are heterozygous. The roan
CC phenotype is due to the Asp-218 mutation.
CC
CC -!- SIMILARITY: Belongs to the SCF family.
CC -----
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; D28934; BAA06061.1; -; mRNA.
CC EMBL; AB033716; BAA94808.1; -; mRNA.
CC EMBL; AF120154; AAD55355.1; -; Genomic_DNA.
CC PIR; S47571; S47571.
CC SMR; Q28132; 29-161.
CC InterPro; IPR012351; Cytokine_4_hlx.
CC InterPro; IPR003452; SCF.
CC PANTHER; PTHR11574; SCF; 1.
CC Pfam; PF02404; SCF; 1.
CC Alternative splicing; Cell adhesion; Glycoprotein; Growth factor;
CC Polymorphism; Signal; Transmembrane.
CC SIGNAL 1 25 Potential.
CC CHAIN 26 274 Kit ligand.
CC TOPO_DOM 26 215 Extracellular (Potential).
CC TRANSMEM 216 238 Potential.
CC TOPO_DOM 239 274 Cytoplasmic (Potential).
CC CARBOHYD 90 90 N-linked (GlcNAc...) (Potential).
CC CARBOHYD 145 145 N-linked (GlcNAc...) (Potential).
CC CARBOHYD 196 196 N-linked (GlcNAc...) (Potential).
CC DISULFID 29 114 By similarity.
CC DISULFID 68 164 By similarity.
CC VARSPLIC 175 203 DSRVSVTKPFMLPPVAASLRNDSSSNR -> G (in isoform 2).
CC
CC FT VARIANT 218 218 A -> D (in roan allele).
CC FT SEQUENCE 274 AA; 31015 MW; D6C1DDB77B0CB12B CRC64;
CC
CC Query Match 83.6%; Score 886.5; DB 1; Length 274;
CC Best Local Similarity 85.3%; Pred. No. 2.6e-60;
CC Matches 174; Conservative 16; Mismatches 13; Indels 1; Gaps 1;
CC
CC QY 1 MKKTQTWILTCIYLQALLFNPLVTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 1 MKKTQTWILTCIYLQALLFNPLVTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60
CC
CC QY 61 MDVLPSCWISSEMVQSLDLDKFSNISEGLSNYSIIDKLVINIVDDLVECVKENS 120
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 61 MDVLPSCWISSEMVQSLDLDKFSNISEGLSNYSIIDKLVINIVDDLVECVKENS 120
CC
CC QY 121 KDLKSKFSKPEPRLTTPPEFFRIFNRSIDAFKDF-VVASETSDCVVSSLTSPKDSRVSV 179
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 121 KDLKSKFSKPEPRLTTPPEFFRIFNRSIDAFKDF-VVASETSDCVVSSLTSPKDSRVSV 179
CC
CC QY 180 TKPFMLPPVAASLRNDSSSNK 203
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 181 TKPFMLPPVAASLRNDSSSNRK 204
CC
CC RESULT 8
CC SCF_CAPHI ID - SCF_CAPHI STANDARD; PRT; 274 AA.
CC AC Q95M19;
CC DT 28-FEB-2003 (rel. 41, Created)
CC DT 28-FEB-2003 (rel. 41, Last sequence update)
CC DT 10-MAY-2005 (rel. 47, Last annotation update)
CC DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
CC cell growth factor) (NGF).
CC GN Name=KITLG; Synonyms=SCF;
CC OS Capra hircus (Goat).
CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OC NCBI_TaxID=9925;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=Shiba; TISSUE=Brain;
RA Yanagisawa N., Tanaka S., Yamanouchi K., Tojo H., Tachi C.;
RT "Identification of splicing isoforms of caprine stem cell factor
RT (GSCF) transcripts and expression patterns of the two major isoforms,
RT GSCF825 and GSCF41, in the brain and the skin of adult and fetal
RT Shiba goats, Capra hircus.";
RL Submitted (MAR-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -!- PTM: A soluble form is produced by proteolytic processing of the
CC extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC -----
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; AB002152; BAB71753.1; -; mRNA.
CC SMR; Q95M19; 29-161.
CC InterPro; IPR012351; Cytokine_4_hlx.
CC InterPro; IPR003452; SCF.
CC PANTHER; PTHR11574; SCF; 1.
CC Pfam; PF02404; SCF; 1.
CC Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
CC SIGNAL 1 25 Potential.
CC CHAIN 26 274 Kit ligand.
CC TOPO_DOM 26 215 Extracellular (Potential).
CC TRANSMEM 216 238 Potential.
CC TOPO_DOM 239 274 Cytoplasmic (Potential).
CC CARBOHYD 90 90 N-linked (GlcNAc...) (Potential).
CC CARBOHYD 97 97 N-linked (GlcNAc...) (Potential).
CC CARBOHYD 145 145 N-linked (GlcNAc...) (Potential).
CC CARBOHYD 196 196 N-linked (GlcNAc...) (Potential).
CC DISULFID 29 114 By similarity.
CC DISULFID 68 164 By similarity.
CC SEQUENCE 274 AA; 31053 MW; BBFE669A509EF65D CRC64;
CC
CC Query Match 83.5%; Score 885.5; DB 1; Length 274;
CC Best Local Similarity 85.3%; Pred. No. 3.1e-60;
CC Matches 174; Conservative 16; Mismatches 13; Indels 1; Gaps 1;
CC
CC QY 1 MKKTQTWILTCIYLQALLFNPLVTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 1 MKKTQTWILTCIYLQALLFNPLVTEGICRNRTNNKDVTKLVANLPKDYMITLKYVPG 60
CC
CC QY 61 MDVLPSCWISSEMVQSLDLDKFSNISEGLSNYSIIDKLVINIVDDLVECVKENS 120
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 61 MDVLPSCWISSEMVQSLDLDKFSNISEGLSNYSIIDKLVINIVDDLVECVKENS 120
CC
CC QY 121 KDLKSKFSKPEPRLTTPPEFFRIFNRSIDAFKDF-VVASETSDCVVSSLTSPKDSRVSV 179
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 121 KDLKSKFSKPEPRLTTPPEFFRIFNRSIDAFKDF-VVASETSDCVVSSLTSPKDSRVSV 179
CC
CC QY 180 TKPFMLPPVAASLRNDSSSNK 203
CC |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
CC Db 181 TKPFMLPPVAASLRNDSSSNRK 204
CC
CC RESULT 9
CC SCF_CANFA

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ID SCF\_CANPA STANDARD; PRT; 274 AA.  
AC Q06220; Q8SPMG;  
DT 01-JUN-1994 (Rel. 29, Created)  
DT 01-JUN-1994 (Rel. 29, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast  
DE cell growth factor) (MGF).  
GN Name=KITLG; Synonyms=Mgf;  
OS Canis familiaris (Dog).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;  
OC Canis.  
OX NCBI\_TaxID=9615;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RC TISSUE=T-cell;  
RX MEDLINE=93106145; PubMed=1281786;  
RA Shull R.M., Suggs S.V., Langley K.E., Okino K.H., Jacobsen F.W.,  
RA Martin F.H.;  
RT "Canine stem cell factor (c-kit ligand) supports the survival of  
RT hematopoietic progenitors in long-term canine marrow culture.";  
RL Exp. Hematol. 20:1118-1124(1992).  
RN [2]  
RP NUCLEOTIDE SEQUENCE OF 17-274.  
RC TISSUE=tail;  
RA Schmutz S.M., Berryere T.G.;  
RT "MGF sequencing in the dog aids in mapping to CFAL5.";  
RL Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediates also  
CC cell-cell adhesion. Acts synergistically with other cytokines,  
CC probably interleukins.  
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a  
CC secreted soluble form.  
CC -!- DEVELOPMENTAL STAGE: Acts in the early stages of hematopoiesis.  
CC -!- PTM: A soluble form is produced by proteolytic processing of the  
CC extracellular domain (By similarity).  
CC -!- SIMILARITY: Belongs to the SCF family.  
CC  
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CC use as long as its content is in no way modified and this statement is not  
CC removed.  
DR EMBL; S53329; AB24619.1; -; mRNA.  
DR EMBL; AY094361; AA016280.1; -; mRNA.  
DR PIR; I46929; I46929.  
DR SMR; Q06220; 29-161.  
DR Ensembl; ENSCAG00000006091; Canis familiaris.  
DR InterPro; IPR012351; Cytokine\_4\_hlx.  
DR InterPro; IPR003452; SCF.  
DR PANTHER; PTHR11574; SCF; 1.  
DR Pfam; PF02404; SCF; 1.  
KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
FT SIGNAL 1 25  
FT CHAIN 26 274  
FT TOPO\_DOM 26 215  
FT TOPO\_DOM 216 238  
FT TRANSMEM 239 274  
FT TOPO\_DOM 239 274  
FT CARBOHYD 90 90  
FT CARBOHYD 97 97  
FT CARBOHYD 145 145  
FT CARBOHYD 196 196  
FT DISULFID 29 114  
FT DISULFID 68 164  
FT SEQUENCE 274 AA; 30870 MW; 4182BE9AED00793B CRC64;

Query Match 81.3%; Score 862.5; DB 1; Length 274;  
Best Local Similarity 84.8%; Pred. No. 1.8e-58;  
Matches 173; Conservative 13; Mismatches 17; Indels 1; Gaps 1;

QY 1 MKKQTWLTCTIYLQLLFFNPLVKTGECIRNRVTNNKDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKQTWLTCTIYLQLLFFNPLVKTGECIRNRVTNNKDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLFHCHWISWVQLSDSLTDLDKFSNISSEGLSNYSIIIDKLVNIVDDLVCEVKENSS 120  
DB 61 MDVLFHCHWISWVQLSDSLTDLDKFSNISSEGLSNYSIIIDKLVNIVDDLVCEVKENSS 120  
QY 121 KDLKSKFSKPEPLFTPEFFRIFNRSIDAFKDF-VVASETSDCVVSSSTLSPKDSRVSV 179  
DB 121 ENVKAPKSPKPEPLFTPEFFRIFNRSIDAFKDF-VVASETSDCVVSSSTLSPKDSRVSV 180  
QY 180 TKPFMLPPVAASSLRNDSSSSNSK 203  
DB 181 TKPFMLPPVAASSLRNDSSSSNSK 204  
RESULT 10  
SCF\_RAT  
ID SCF\_RAT STANDARD; PRT; 273 AA.  
AC P21581; Q9QWZ4; Q9Z2E7;  
DT 01-MAY-1991 (Rel. 18, Created)  
DT 28-FEB-2003 (Rel. 41, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast  
DE cell growth factor) (MGF) (Hematopoietic growth factor KL).  
GN Name=Kitlg; Synonyms=Mgf;  
OS Rattus norvegicus (Rat).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
OC Muridea; Muridae; Murinae; Rattus.  
OX NCBI\_TaxID=10116;  
RN [1]  
RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
RA Teramoto T., Nagashima M., Thorgerirsson S.S.;  
RL Submitted (JUN-1998) to the EMBL/GenBank/DBJ databases.  
RN [2]  
RP NUCLEOTIDE SEQUENCE OF 1-201, AND PARTIAL PROTEIN SEQUENCE.  
RX MEDLINE=91004219; PubMed=2208279; DOI=10.1016/0092-8674(90)90301-T;  
RA Martin F.H., Suggs S.V., Langley K.E., Lu H.S., Ting J., Okino K.H.,  
RA Morris C.F., McNiece I.K., Jacobsen F.W., Mendiaz E.A., Birkett N.C.,  
RA Smith K.A., Johnson M.J., Parker V.P., Flores J.C., Patel A.C.,  
RA Fisher E.F., Erjavec H.O., Herrera C.J., Wypych J., Sachdev R.K.,  
RA Pope J.A., Leslie I., Wen D., Lin C.-H., Cupples R.L., Zsebo K.M.;  
RT "Primary structure and functional expression of rat and human stem  
RT cell factor DNAs";  
RL Cell 63:203-211(1990).  
RN [3]  
RP PROTEIN SEQUENCE OF 26-190, CARBOHYDRATE-LINKAGE SITES, AND DISULFIDE  
RP BONDS.  
RC STRAIN=Buffalo; TISSUE=Liver;  
RX MEDLINE=91217037; PubMed=1708771;  
RA Lu H.S., Clogston C.L., Wypych J., Fausset P.R., Lauren S.,  
RA Mendiaz E.A., Zsebo K.M., Langley K.E.;  
RT "Amino acid sequence and post-translational modification of stem cell  
RT factor isolated from buffalo rat liver cell-conditioned medium.";  
RL J. Biol. Chem. 266:8102-8107(1991).  
RN [4]  
RP PROTEIN SEQUENCE OF 26-39.  
RX MEDLINE=91004218; PubMed=2208278; DOI=10.1016/0092-8674(90)90300-4;  
RA Zsebo K.M., Wypych J., McNiece I.K., Lu H.S., Smith K.A.,  
RA Karkare S.B., Wypych R.K., Yushchenko V.N., Birkett N.C.,  
RA Williams L.R., Satyagal V.N., Tung W., Bosselman R.A., Mendiaz E.A.,  
RA Langley K.E.;  
RT "Identification, purification, and biological characterization of  
RT hematopoietic stem cell factor from buffalo rat liver-conditioned  
RT medium";  
RL Cell 63:195-201(1990).  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediates also  
CC cell-cell adhesion. Acts synergistically with other cytokines,

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CC probably interleukins.
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).
CC Also exists as a secreted soluble form (isoform 1 only) (By
CC similarity).
CC -!- ALTERNATIVE PRODUCTS:
CC Event-Alternative splicing; Named isoforms=2;
CC Name=1; Synonyms=KL-1;
CC IsoId=P21581-1; Sequence=Displayed;
CC Name=2; Synonyms=KL-2;
CC IsoId=P21581-2; Sequence=VSP 006025;
CC -!- DEVELOPMENTAL STAGE: Acts in the early stages of hematopoiesis.
CC -!- PTM: A soluble form is produced by proteolytic processing of
CC isoform 1 in the extracellular domain.
CC -!- SIMILARITY: Belongs to the SCF family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AF071204; AAD02827.1; -; mRNA.
CC EMBL; AF071205; AAD02828.1; -; mRNA.
CC EMBL; M59966; AAK42117.1; -; mRNA.
CC F01; B35974; B35974.
CC F01; P21581; 29-159.
CC DR Ensembl; ENSRNOG000005386; Rattus norvegicus.
CC DR InterPro; IPR012351; Cytokine_4_hlx.
CC DR InterPro; IPR003452; SCF.
CC DR PANTHER; PTHR11574; SCF; 1.
CC Pfam; PF02404; SCF; 1.
CC Alternative splicing; Cell adhesion; Direct protein sequencing;
CC Glycoprotein; Growth factor; Pyrrolidone carboxylic acid; Signal;
CC Transmembrane.
CC
CC SIGNAL 1 25 Kit ligand.
CC CHAIN 26 273 Extracellular (Potential).
CC TOPO_DOM 26 214 Potential.
CC TRANSMEM 215 237 Potential.
CC TOPO_DOM 238 273 Cytoplasmic (Potential).
CC MOD_RES 26 26 Pyrrolidone carboxylic acid.
CC CARBOHYD 90 90 N-linked (GlcNAc...); partial.
CC CARBOHYD 145 145 N-linked (GlcNAc...).
CC CARBOHYD 167 167 O-linked (Probable).
CC CARBOHYD 168 168 O-linked (Probable).
CC CARBOHYD 180 180 O-linked (Probable).
CC CARBOHYD 195 195 N-linked (GlcNAc...); partial.
CC DISULFID 29 114
CC DISULFID 68 163
CC VARSPLIC 174 202
CC
CC DRSVVTKPFMLPPVAASLRNDSSSNR -> G (in
CC isoform 2).
CC /FTID=VSP 006025.
CC S -> P (in Ref. 1; AAD02828).
CC
CC CONFLICT 207 207 S -> P (in Ref. 1; AAD02828).
CC SEQUENCE 273 AA; 30712 MW; C0F56527DC93PD27 CRC64;
CC
CC Query Match 81.1%; Score 861; DB 1; Length 273;
CC Best Local Similarity 82.3%; Pred. No. 2.4e-58;
CC Matches 167; Conservative 15; Mismatches 21; Indels 0; Gaps 0;
CC
CC QY 1 MKKTTWTILTCYLOLLFPNPLVKTGICRNVNNTNNVDVTKLVANLPKDYMITLKYVPG 60
CC DB 1 MKKTTWTITCYLOLLFPNPLVKTGICRNPVTONVDKTKLVANLPNDYMITLNYVAG 60
CC
CC QY 61 MDVLPSSHCHWISBWWVQLSDSLTDLDKFSNISEGLSNYSIIDKLVNVDLVECKRNS 120
CC DB 61 MDVLPSSHCHWLRDMVTHLSVSLTLLDKFSNISEGLSNYSIIDKLVNVDLVECKRNS 120
CC
CC QY 121 KDLKSKFSGPRLPTPEEFFIFNRSIDAFKDFVVASSTSCVSTLSPKDSRVSVT 180
CC DB 121 KNVKSLKPKETRNFTPEEFFIFNRSIDAFKDFVVASSTSCVSTLSPKDSRVSVT 180
CC
CC QY 181 KPFLMPPVAASLRNDSSSNR 203
CC
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Db 181 KPFLMPPVAASLRNDSSSNR 203
RESULT 11
SCF_MUSVI
ID SCF MUSVI STANDARD; PRT; 274 AA.
AC Q95N18; Q95MN5;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DE 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast
DE cell growth factor) (MGP).
GN Name=KITLG; Synonyms=SCF;
OS Mus musculus (American mink).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae;
OC Mustelinae; Mustela.
OX NCBI_TaxID=9667;
RN [1]
RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).
RA Bennett R.D., Murphy B.D.;
RL Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -!- ALTERNATIVE PRODUCTS:
CC Event-Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=Q95N18-1; Sequence=Displayed;
CC Name=2;
CC IsoId=Q95N18-2; Sequence=VSP 006024;
CC -!- PTM: A soluble form is produced by proteolytic processing of
CC isoform 1 in the extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AY013712; AAG37434.1; -; mRNA.
CC EMBL; AF323757; AAK73366.1; -; mRNA.
CC SMR; Q95N18; 29-161.
CC InterPro; IPR012351; Cytokine_4_hlx.
CC InterPro; IPR003452; SCF.
CC PANTHER; PTHR11574; SCF; 1.
CC Pfam; PF02404; SCF; 1.
CC Alternative splicing; Cell adhesion; Glycoprotein; Growth factor;
CC Signal; Transmembrane.
CC
CC SIGNAL 1 25 By similarity.
CC CHAIN 26 274 Kit ligand.
CC TOPO_DOM 26 215 Extracellular (Potential).
CC TRANSMEM 216 238 Potential.
CC TOPO_DOM 239 274 Cytoplasmic (Potential).
CC CARBOHYD 90 90 N-linked (GlcNAc...); (Potential).
CC CARBOHYD 97 97 N-linked (GlcNAc...); (Potential).
CC CARBOHYD 145 145 N-linked (GlcNAc...); (Potential).
CC CARBOHYD 156 196 By similarity.
CC DISULFID 29 114 By similarity.
CC DISULFID 68 164 By similarity.
CC VARSPLIC 175 203 isoform 2).
CC /FTID=VSP 006024.
CC S -> P (in Ref. 1; AAK73366).
CC S -> N (in Ref. 1; AAK73366).
CC EREPOEV -> RSFRKNCNGFYHTVLSVGG (in Ref.
CC 1; AAK73366).
CC
CC CONFLICT 65 65
CC CONFLICT 171 171
CC CONFLICT 268 274
CC
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SQ SEQUENCE 274 AA; 31035 MW; 5AC1619014AE5E72 CRC64;

Query Match 81.0%; Score 859.5; DB 1; Length 274;  
 Best Local Similarity 83.3%; Pred. No. 3.1e-58;  
 Matches 170; Conservative 16; Mismatches 17; Indels 1; Gaps 1;

QY 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRTNNVNDVTKLVANLPKDYMTILKYVPG 60  
 DB 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRTNNVNDVTKLVANLPKDYMTILKYVPG 60  
 QY 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
 QY 121 KDLKSKFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSV 179  
 DB 121 ENVKSKPKPEPLFTPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSV 180  
 QY 180 TKPFMLPPVAASLRNDSSSSNKK 203  
 DB 181 TRPFMLPPVAASLRNDSSSSNKK 204

RESULT 12  
 Q64384\_9MURI PRELIMINARY; PRT; 208 AA.  
 AC Q64384;  
 DT 01-NOV-1996 (TREMELrel. 01, Created)  
 DT 01-NOV-1996 (TREMELrel. 01, Last sequence update)  
 DT 01-MAR-2004 (TREMELrel. 26, Last annotation update)  
 DE C-kit ligand C-terminally truncated secreted form KL-Sld.  
 GN Name=Kitl;  
 OS Mus sp.  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Murinae; Mus.  
 OX NCBI\_TaxID=10095;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=92330001; PubMed=1378327;  
 RA Huang E.J., Nocka K.H., Buck J., Besmer P.;  
 RT "Differential expression and processing of two cell associated forms  
 of the kit-ligand: KL-1 and KL-2.";  
 RL Mol. Biol. Cell 3:349-362(1992).  
 DR EMBL; S40536; AAB22556.2; -; mRNA.  
 DR HSP; P21583; 1SCF.  
 DR SMR; Q64384; 29-159.  
 DR MGI; MGI:96974; Kitl.  
 DR GO; GO:0005173; P:stem cell factor receptor binding; IEA.  
 DR GO; GO:0006020; C:membrane; IEA.  
 DR GO; GO:0007153; P:stem cell factor receptor binding; IEA.  
 DR GO; GO:0007155; P:cell adhesion; IEA.  
 DR InterPro; IPR003452; SCF.  
 DR Pfam; PF02404; SCF; 1.  
 SQ SEQUENCE 208 AA; 23222 MW; C74DD639566EB817 CRC64;

Query Match 80.6%; Score 855; DB 2; Length 208;  
 Best Local Similarity 82.3%; Pred. No. 5e-58;  
 Matches 167; Conservative 16; Mismatches 20; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRTNNVNDVTKLVANLPKDYMTILKYVPG 60  
 DB 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRTNNVNDVTKLVANLPKDYMTILKYVPG 60  
 QY 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
 QY 121 KDLKSKFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSV 180  
 DB 121 KDLKSKFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSV 180  
 QY 181 KPFPMLPPVAASLRNDSSSSNKK 203  
 DB 181 KPFPMLPPVAASLRNDSSSSNKK 203

RESULT 14  
 SCF\_MOUSE  
 ID SCF\_MOUSE STANDARD; PRT; 273 AA.  
 AC P20826; P97332; Q62524; Q64222; Q921N5;  
 DT 01-FEB-1991 (Rel. 17, Created)  
 DT 01-MAY-1991 (Rel. 18, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast  
 cell growth factor) (MGP) (Hematopoietic growth factor KL) (Steel  
 factor).  
 DE factor).  
 GN Name=Kitlg; Synonyms=Kitl, Mgf, Sl, Slf;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;

DB 181 KPFPMLPPVAASLRNDSSSSNKK 203

RESULT 13  
 Q78ED8\_MOUSE PRELIMINARY; PRT; 208 AA.  
 AC Q78ED8;  
 DT 05-JUL-2004 (TREMELrel. 27, Created)  
 DT 05-JUL-2004 (TREMELrel. 27, Last sequence update)  
 DT 05-JUL-2004 (TREMELrel. 27, Last annotation update)  
 DE Kit ligand.  
 GN Name=Kitl;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Murinae; Mus.  
 OX NCBI\_TaxID=10090;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=91160046; PubMed=1705866; DOI=10.1016/0092-8674(91)90326-T;  
 RA Flanagan J.G., Chan D.C., Leder P.;  
 RT "Transmembrane form of the kit ligand growth factor is determined by  
 alternative splicing and is missing in the Sld mutant.";  
 RL Cell 64:1025-1035(1991).  
 DR EMBL; M64262; AAA39378.1; -; mRNA.  
 DR SMR; Q78ED8; 29-159.  
 DR MGI; MGI:96974; Kitl.  
 DR GO; GO:0005615; C:extracellular space; IEA.  
 DR GO; GO:0016021; C:integral to membrane; IEA.  
 DR GO; GO:0005886; C:plasma membrane; IEA.  
 DR GO; GO:0005515; P:protein binding; IPT.  
 DR GO; GO:0005173; P:stem cell factor receptor binding; IEA.  
 DR GO; GO:0007281; P:germ cell development; TAS.  
 DR GO; GO:0050731; P:positive regulation of peptidyl-tyrosine ph. .; IDA.  
 DR InterPro; IPR003452; SCF.  
 DR Pfam; PF02404; SCF; 1.  
 SQ SEQUENCE 208 AA; 23222 MW; C74DD639566EB817 CRC64;

Query Match 80.6%; Score 855; DB 2; Length 208;  
 Best Local Similarity 82.3%; Pred. No. 5e-58;  
 Matches 167; Conservative 16; Mismatches 20; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRTNNVNDVTKLVANLPKDYMTILKYVPG 60  
 DB 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRTNNVNDVTKLVANLPKDYMTILKYVPG 60  
 QY 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
 QY 121 KDLKSKFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSV 180  
 DB 121 KDLKSKFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSV 180  
 QY 181 KPFPMLPPVAASLRNDSSSSNKK 203  
 DB 181 KPFPMLPPVAASLRNDSSSSNKK 203

RESULT 14  
 SCF\_MOUSE  
 ID SCF\_MOUSE STANDARD; PRT; 273 AA.  
 AC P20826; P97332; Q62524; Q64222; Q921N5;  
 DT 01-FEB-1991 (Rel. 17, Created)  
 DT 01-MAY-1991 (Rel. 18, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast  
 cell growth factor) (MGP) (Hematopoietic growth factor KL) (Steel  
 factor).  
 DE factor).  
 GN Name=Kitlg; Synonyms=Kitl, Mgf, Sl, Slf;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;

OC Muroidea; Muridae; Murinae; Mus.  
OX NCBI\_TaxID=10090;  
RN [1]  
RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
RC STRAIN=WCB6F1;  
RX MEDLINE=91004223; PubMed=1698558; DOI=10.1016/0092-8674(90)90304-W;  
RA Anderson D.M., Lyman S.D., Baird A., Wignall J.M., Eisenman J.,  
RA Rauch C., March C.J., Boswell H.S., Gimpel S.D., Cosman D.,  
RA Williams D.E.;  
RA "Molecular cloning of mast cell growth factor, a hematopoietin that is  
RT active in both membrane bound and soluble forms.";  
RL Cell 63:235-243(1990).  
RN [2]  
RN NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
RX MEDLINE=92330001; PubMed=1378327;  
RA Huang E.J., Nocka K.H., Buck J., Besmer P.;  
RA "Differential expression and processing of two cell associated forms  
RT of the kit-ligand: KL-1 and KL-2";  
RL Mol. Biol. Cell 3:349-362(1992).  
RN [3]  
RN NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
RC STRAIN=WCB6F1;  
RX MEDLINE=91160046; PubMed=1705866; DOI=10.1016/0092-8674(91)90326-T;  
RA Planagan J.G., Chan D.C., Leder P.;  
RA "Transmembrane form of the kit ligand growth factor is determined by  
RT alternative splicing and is missing in the Sld mutant.";  
RL Cell 64:1025-1035(1991).  
RN [4]  
RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
RX MEDLINE=93012940; PubMed=1383087;  
RA Brannan C.I., Bedell M.A., Resnick J.L., Eppig J.J., Handel M.A.,  
RA Williams D.E., Lyman S.D., Donovan P.J., Jenkins N.A., Copeland N.G.;  
RA "Developmental abnormalities in Steel17H mice result from a splicing  
RT defect in the steel factor cytoplasmic tail.";  
RL Genes Dev. 6:1832-1842(1992).  
RN [5]  
RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
RC STRAIN=C57BL/6J;  
RX MEDLINE=97002551; PubMed=8849898;  
RA Bedell M.A., Copeland N.G., Jenkins N.A.;  
RA "Multiple pathways for Steel regulation suggested by genomic and  
RT sequence analysis of the murine Steel gene";  
RL Genetics 142:927-934(1996).  
RN [6]  
RN NUCLEOTIDE SEQUENCE (ISOFORM 1), AND VARIANTS PRO-193 AND SER-207.  
RC STRAIN=C3H/E1; TISSUE=Brain;  
RX MEDLINE=97032534; PubMed=8875893; DOI=10.1007/s00359900247;  
RA Graw J., Loester J., Neuhauser-Klaus A., Pretsch W., Schmitt-John T.;  
RA "Molecular analysis of two new Steel mutations in mice shows a  
RT transversion or an insertion";  
RL Mamm. Genome 7:843-846(1996).  
RN [7]  
RN NUCLEOTIDE SEQUENCE (ISOFORM 1), AND VARIANTS SER-122; PRO-193 AND  
RP SER-207.  
RC STRAIN=102/E1 x C3H/E1;  
RX MEDLINE=98025115; PubMed=9360640; DOI=10.1016/S1383-5726(97)00005-8;  
RA Graw J., Neuhauser-Klaus A., Pretsch W.;  
RA "Detection of a point mutation (A to G) in exon 5 of the murine Mgf  
RT gene defines a novel allele at the Steel locus with a weak  
RT phenotype";  
RL Mamm. Res. 382:75-78(1997).  
RN [8]  
RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
RX MEDLINE=22354683; PubMed=12466851; DOI=10.1038/nature01266;  
RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,  
RA Nakaide I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,  
RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gotojori T.,  
RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,  
RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,  
RA Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,  
RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,  
RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,  
RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,  
RA Kanai A., Kawaji H., Kawasaki Y., Kedzierski R.M., King B.L.,  
RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,  
RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,  
RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,  
RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,  
RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,  
RA Sadelin A., Schneider C., Semple C.A., Setou M., Shimada K.,  
RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,  
RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,  
RA Wilming L.G., Wushaw-Boris A., Yanagisawa M., Yang I., Yang L.,  
RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,  
RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,  
RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,  
RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,  
RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,  
RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,  
RA Birney E., Hayashizaki Y.;  
RT "Analysis of the mouse transcriptome based on functional annotation of  
RT 60,770 full-length cDNAs";  
RL Nature 420:563-573(2002).  
RN [9]  
RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1), AND VARIANT  
RP SER-207.  
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.F., Schuler G.D.,  
RA Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,  
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S.C., Garcia A.M., Gay L.J., Hulyk S.W.,  
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,  
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
RA Blakesley R., Touchman J.W., Green E.D., Dickinson M.C.,  
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,  
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;  
RT "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences";  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RN [10]  
RN NUCLEOTIDE SEQUENCE OF 1-270 (ISOFORM 1), AND PROTEIN SEQUENCE OF  
RP 26-65.  
RX MEDLINE=91004221; PubMed=1698557; DOI=10.1016/0092-8674(90)90303-V;  
RA Huang E., Nocka K., Beier D.R., Chu T.Y., Buck J., Lahm H.W.,  
RA Wellner D., Leder P., Besmer P.;  
RA "The hematopoietic growth factor KL is encoded by the Sl locus and is  
RT the ligand of the c-kit receptor, the gene product of the W locus";  
RL Cell 63:225-233(1990).  
RN [11]  
RN NUCLEOTIDE SEQUENCE OF 1-201.  
RX MEDLINE=91004220; PubMed=1698556; DOI=10.1016/0092-8674(90)90302-U;  
RA Zsebo K.M., Williams D.A., Geissler E.N., Broudy V.C., Martin F.H.,  
RA Atkins H.L., Hsu R.-Y., Birkett N.C., Okino K.H., Murodock D.C.,  
RA Jacobsen F.W., Langley K.E., Smith K.A., Takeishi T., Cattanch B.M.,  
RA Galli S.J., Suggs S.V.;  
RA "Stem cell factor is encoded at the Sl locus of the mouse and is the  
RT ligand for the c-kit tyrosine kinase receptor";  
RL Cell 63:213-224(1990).  
RN [12]  
RN PROTEIN SEQUENCE OF 26-53.  
RX MEDLINE=91004216; PubMed=1698554; DOI=10.1016/0092-8674(90)90298-S;  
RA Copeland N.G., Gilbert D.J., Cho B.C., Donovan P.J., Jenkins N.A.,  
RA Cosman D., Anderson D., Lyman S.D., Williams D.E.;  
RA "Mast cell growth factor maps near the steel locus on mouse chromosome  
RT 10 and is deleted in a number of steel alleles";  
RL Cell 63:175-183(1990).  
RN [13]



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GenCore version 5.1.7  
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OM protein - protein search, using sw model

Run on: February 22, 2006, 18:19:42 ; Search time 25.2121 Seconds  
(without alignments)  
682.074 Million cell updates/sec

Title: US-10-620-642-46

Perfect score: 1061

Sequence: 1 MKKTQTWILTCYQLLLFN.....AASSLRNDSSSSNKIYILI 208

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*

1: /cgn2\_6/prodata/1/1aa/5-COMB.pep.\*

2: /cgn2\_6/prodata/1/1aa/6-COMB.pep.\*

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4: /cgn2\_6/prodata/1/1aa/PCITUS-COMB.pep.\*

5: /cgn2\_6/prodata/1/1aa/RE-COMB.pep.\*

6: /cgn2\_6/prodata/1/1aa/backfiles1.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1061	100.0	208	2 US-08-836-252A-6	Sequence 6, Appli
2	1061	100.0	208	2 US-08-482-918-46	Sequence 46, Appl
3	1061	100.0	208	2 US-09-224-681-46	Sequence 46, Appl
4	1061	100.0	208	2 US-08-336-728A-46	Sequence 46, Appl
5	1061	100.0	208	2 US-09-635-251-46	Sequence 46, Appl
6	1061	100.0	208	2 US-09-224-683-46	Sequence 46, Appl
7	1061	100.0	208	2 US-09-604-325A-46	Sequence 46, Appl
8	1030	97.1	273	1 US-08-220-379B-2	Sequence 2, Appli
9	1030	97.1	273	1 US-08-628-428-9	Sequence 9, Appli
10	1030	97.1	273	2 US-08-482-918-48	Sequence 48, Appl
11	1030	97.1	273	2 US-08-482-918-49	Sequence 49, Appl
12	1030	97.1	273	2 US-08-482-918-61	Sequence 61, Appl
13	1030	97.1	273	2 US-09-224-681-48	Sequence 48, Appl
14	1030	97.1	273	2 US-09-224-681-49	Sequence 49, Appl
15	1030	97.1	273	2 US-09-224-681-61	Sequence 61, Appl
16	1030	97.1	273	2 US-08-336-728A-48	Sequence 48, Appl
17	1030	97.1	273	2 US-08-336-728A-49	Sequence 49, Appl
18	1030	97.1	273	2 US-08-336-728A-61	Sequence 61, Appl
19	1030	97.1	273	2 US-09-635-251-48	Sequence 48, Appl
20	1030	97.1	273	2 US-09-635-251-49	Sequence 49, Appl
21	1030	97.1	273	2 US-09-635-251-61	Sequence 61, Appl
22	1030	97.1	273	2 US-09-224-683-48	Sequence 48, Appl
23	1030	97.1	273	2 US-09-224-683-49	Sequence 49, Appl
24	1030	97.1	273	2 US-09-224-683-61	Sequence 61, Appl
25	1030	97.1	273	2 US-09-604-325A-48	Sequence 48, Appl
26	1030	97.1	273	2 US-09-604-325A-49	Sequence 49, Appl
27	1030	97.1	273	2 US-09-604-325A-61	Sequence 61, Appl

28	1030	97.1	290	2 US-09-949-016-9393	Sequence 9393, Ap
29	1030	97.1	290	2 US-09-949-016-9394	Sequence 9394, Ap
30	1026	96.7	273	2 US-08-482-918-50	Sequence 50, Appl
31	1026	96.7	273	2 US-09-224-681-50	Sequence 50, Appl
32	1026	96.7	273	2 US-08-336-728A-50	Sequence 50, Appl
33	1026	96.7	273	2 US-09-635-251-50	Sequence 50, Appl
34	1026	96.7	273	2 US-09-224-683-50	Sequence 50, Appl
35	1026	96.7	273	2 US-09-604-325A-50	Sequence 50, Appl
36	1001	94.3	196	2 US-08-336-728A-44	Sequence 44, Appl
37	975	91.9	424	4 PCT-US95-03866-14	Sequence 14, Appl
38	974	91.8	424	4 PCT-US95-03866-12	Sequence 12, Appl
39	920	86.7	266	2 US-08-482-918-57	Sequence 57, Appl
40	920	86.7	266	2 US-09-224-681-57	Sequence 57, Appl
41	920	86.7	266	2 US-08-336-728A-57	Sequence 57, Appl
42	920	86.7	266	2 US-09-635-251-57	Sequence 57, Appl
43	920	86.7	266	2 US-09-224-683-57	Sequence 57, Appl
44	920	86.7	266	2 US-09-604-325A-57	Sequence 57, Appl
45	898	84.6	248	1 US-08-955-848A-82	Sequence 82, Appl

#### ALIGNMENTS

RESULT 1  
US-08-836-252A-6  
; Sequence 6, Application US/08836252A  
; Patent No. 6177556  
; GENERAL INFORMATION:  
; APPLICANT: Sharkey, Andrew M.  
; APPLICANT: Smith, Stephen K.  
; APPLICANT: Dellow, Kimberley A.  
; TITLE OF INVENTION: HUMAN SCF, A SPLICE VARIANT THEREOF, ITS  
; NUMBER OF INVENTIONS: PHARMACEUTICAL USE  
; NUMBER OF SEQUENCES: 18  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C.  
; STREET: 1100 NEW YORK AVENUE, N.W. SUITE 600  
; CITY: WASHINGTON  
; STATE: D.C.  
; COUNTRY: USA  
; ZIP: 20005  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/836,252A  
; FILING DATE: 31-JULY-1997  
; CLASSIFICATION: 536  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: WO PCT/GB95/02547  
; FILING DATE: 31-OCT-1995  
; CLASSIFICATION: 536  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: GB 9422293.2  
; FILING DATE: 04-NOV-1994  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: GB 9508618.7  
; FILING DATE: 28-APR-1995  
; ATTORNEY/AGENT INFORMATION:  
; NAME: ROBERT W. ESMOND  
; REGISTRATION NUMBER: 32,893  
; REFERENCE/DOCKET NUMBER: 0623.0550000  
; TELEPHONE: (202) 371-2600  
; TELEFAX: (202) 371-2540  
; INFORMATION FOR SEQ ID NO: 6:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 208 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein

US-08-836-252A-6

Query Match 100.0%; Score 1061; DB 2; Length 208;  
Best Local Similarity 100.0%; Pred. No. 3.4e-101;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
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QY 61 MDVLPCHWCWISVMVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPCHWCWISVMVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
  
QY 121 KDLKGSFKSPRLFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKGSFKSPRLFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
  
QY 181 KPFMLPPVAASLRNDSSSSNKIYILI 208  
DB 181 KPFMLPPVAASLRNDSSSSNKIYILI 208

RESULT 2

US-08-482-918-46  
; Sequence 46, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 46:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 208 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-482-918-46

Query Match 100.0%; Score 1061; DB 2; Length 208;  
Best Local Similarity 100.0%; Pred. No. 3.4e-101;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
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DB 1 MKKTTWTLCYLOLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPCHWCWISVMVQVLSLTDLLDKFNSISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
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QY 121 KDLKGSFKSPRLFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKGSFKSPRLFTPEEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
  
QY 181 KPFMLPPVAASLRNDSSSSNKIYILI 208  
DB 181 KPFMLPPVAASLRNDSSSSNKIYILI 208

RESULT 3

US-09-224-681-46  
; Sequence 46, Application US/09224681  
; Patent No. 6207454  
; GENERAL INFORMATION:  
; APPLICANT: Zebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene  
; Transfer with Stem Cell Factor (SCF) Polypeptide  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,681  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35199  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX:



INFORMATION FOR SEQ ID NO: 46:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 208 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-224-681-46

Query Match 100.0%; Score 1061; DB 2; Length 208;  
Best Local Similarity 100.0%; Pred. No. 3.4e-101;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MKKTQWLTCTIYQLQLLNFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
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DB 61 MDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
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DB 121 KDLKSFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVSVT 180  
QY 181 KPFMLPPVAASSLRNDSSSSNKIYLI 208  
DB 181 KPFMLPPVAASSLRNDSSSSNKIYLI 208

RESULT 4  
US-08-336-728A-46  
Sequence 46, Application US/08336728A  
Patent No. 6207802  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/336,728A  
FILING DATE: 09-NOV-1994  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.

REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32956  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 46:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 208 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-336-728A-46

Query Match 100.0%; Score 1061; DB 2; Length 208;  
Best Local Similarity 100.0%; Pred. No. 3.4e-101;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQWLTCTIYQLQLLNFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQWLTCTIYQLQLLNFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVSVT 180  
DB 121 KDLKSFSPKPEPLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVSVT 180  
QY 181 KPFMLPPVAASSLRNDSSSSNKIYLI 208  
DB 181 KPFMLPPVAASSLRNDSSSSNKIYLI 208

RESULT 5  
US-09-635-251-46  
Sequence 46, Application US/09635251  
Patent No. 6759215  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/635,251  
FILING DATE: 07-AUG-2000  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/449,182  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 04-OCT-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990

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; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/32957A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 208 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 46:
US-09-635-251-46

Query Match          100.0%; Score 1061; DB 2; Length 208;
Best Local Similarity 100.0%; Pred. No. 3.4e-101;
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKQTWILTCIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
DB 1 MKKQTWILTCIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
QY 61 MDVLPSCWCWISWMVQLSDSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120
DB 61 MDVLPSCWCWISWMVQLSDSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120
QY 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVSVT 180
DB 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVSVT 180
QY 181 KPFMLPPVAASSLRNDSSSSNSKIYILI 208
DB 181 KPFMLPPVAASSLRNDSSSSNSKIYILI 208

RESULT 6
US-09-224-683-46
; Sequence 46, Application US/09224683
; Patent No. 6841147
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/224,683
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/005,893
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; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35136
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 208 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-224-683-46

Query Match          100.0%; Score 1061; DB 2; Length 208;
Best Local Similarity 100.0%; Pred. No. 3.4e-101;
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKQTWILTCIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
DB 1 MKKQTWILTCIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
QY 61 MDVLPSCWCWISWMVQLSDSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120
DB 61 MDVLPSCWCWISWMVQLSDSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120
QY 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVSVT 180
DB 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVSVT 180
QY 181 KPFMLPPVAASSLRNDSSSSNSKIYILI 208
DB 181 KPFMLPPVAASSLRNDSSSSNSKIYILI 208

RESULT 7
US-09-604-325A-46
; Sequence 46, Application US/09604325A
; Patent No. 6852313
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
```

STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-Jun-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32953  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 46:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 208 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 46:  
US-09-604-325A-46  
Query Match 100.0%; Score 1061; DB 2; Length 208;  
Best Local Similarity 100.0%; Pred. No. 3.4e-101; Mismatches 0; Indels 0; Gaps 0;  
Matches 208; Conservative 0;  
Qy 1 MKKTQTWLTCTIYLQLLFPNPLVKTEGICRRNVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYLQLLFPNPLVKTEGICRRNVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Qy 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
Qy 121 KDLKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVST 180  
Db 121 KDLKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVST 180  
Qy 181 KPFMLPPVAASLRNDSSSNKYILI 208  
Db 181 KPFMLPPVAASLRNDSSSNKYILI 208  
RESULT 8  
US-08-220-379B-2  
Sequence 2, Application US/08220379B  
Patent No. 5525708  
GENERAL INFORMATION:  
APPLICANT: NO. 5525708ka, Karl  
APPLICANT: Lobell, Robert B  
TITLE OF INVENTION: STABILIZED DIMER OF KIT LIGAND  
NUMBER OF SEQUENCES: 7  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fish & Neave  
STREET: 1251 Avenue of the Americas

CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10020  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/220,379B  
FILING DATE: 28-MAR-1994  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Haley Jr, James F  
REGISTRATION NUMBER: 27,794  
REFERENCE/DOCKET NUMBER: CytoMed/2  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212-596-9000  
TELEFAX: 212-596-9090  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:  
NAME/KEY: cleavage site  
LOCATION: 164...165  
US-08-220-379B-2  
Query Match 97.1%; Score 1030; DB 1; Length 273;  
Best Local Similarity 99.5%; Pred. No. 7.9e-98;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 MKKTQTWLTCTIYLQLLFPNPLVKTEGICRRNVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYLQLLFPNPLVKTEGICRRNVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Qy 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
Qy 121 KDLKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVST 180  
Db 121 KDLKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVST 180  
Qy 181 KPFMLPPVAASLRNDSSSNK 203  
Db 181 KPFMLPPVAASLRNDSSSNRK 203  
RESULT 9  
US-08-628-428-9  
Sequence 9, Application US/08628428  
Patent No. 5885962  
GENERAL INFORMATION:  
APPLICANT: Lu, Hsieng  
TITLE OF INVENTION: SCF ANALOG COMPOSITIONS AND METHODS  
NUMBER OF SEQUENCES: 9  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Amgen Inc.  
STREET: 1840 DeHavilland Drive  
CITY: Thousand Oaks  
STATE: CA  
COUNTRY: USA  
ZIP: 91320-1789  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent in Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:

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, APPLICATION NUMBER: US/08/628,428
, FILING DATE: 05-APR-1996
, CLASSIFICATION: 435
, ATTORNEY/AGENT INFORMATION:
, NAME: Knight, Matthew W
, REGISTRATION NUMBER: 36,846
, REFERENCE/DOCKET NUMBER: A-400
, INFORMATION FOR SEQ ID NO: 9:
, SEQUENCE CHARACTERISTICS:
, LENGTH: 273 amino acids
, TYPE: amino acid
, STRANDEDNESS: single
, TOPOLOGY: linear
, MOLECULE TYPE: protein
, FEATURE:
, NAME/KEY: Protein
, LOCATION: 1..273
, OTHER INFORMATION: /note= "NOTE: Mature full length
, 1-248 SCF protein begins at amino acid 26; amino acid 1-25
, OTHER INFORMATION: include Met and leader sequences for membrane band form of hu
, OTHER INFORMATION: recombinant SCF."
, US-08-628-428-9

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	Query Match	97.1%;	Score 1030;	DB 1;	Length 273;
	Best Local Similarity	99.5%;	Pred. No. 7.9e-98;		
	Matches 202;	Conservative 0;	Mismatches 1;	Indels 0;	Gaps 0;
Qy	1	MKKTQTWILTCIYLQLLFNP	LVTKEGICRRNVTNNVKDVT	KLVANLPKDYMITLKYVPG	60
Db	1	MKKTQTWILTCIYLQLLFNP	LVTKEGICRRNVTNNVKDVT	KLVANLPKDYMITLKYVPG	60
Qy	61	MDVLPSCHWISVMVQLSDSL	TDLLDKFSNISSEGLSNYSII	DKLVNIIVDDLVEVC	120
Db	61	MDVLPSCHWISVMVQLSDSL	TDLLDKFSNISSEGLSNYSII	DKLVNIIVDDLVEVC	120
Qy	121	KDLKSKSPKPEPRLFTPEEP	RIENRSIDAFKDFVA	SETSDCVVSSSTLSPEKDS	180
Db	121	KDLKSKSPKPEPRLFTPEEP	RIENRSIDAFKDFVA	SETSDCVVSSSTLSPEKDS	180
Qy	181	KPFMLPPVAASSLRNDSS	SSNSK	203	
Db	181	KPFMLPPVAASSLRNDSS	SSNSK	203	

RESULT 10  
US-08-482-918-48  
; Sequence 48, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Krisztina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent in Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.

```

; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/33005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 48:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
;
US-08-482-918-48

Query Match          97.1%; Score 1030; DB 2; Length 273;
Best Local Similarity 99.5%; Pred. No. 7.9e-98;
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0

QY      1  MKKTQTWILTCIYQLLLFNPLVKTEGICNRRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
DB      1  MKKTQTWILTCIYQLLLFNPLVKTEGICNRRVTNNVKDVTKLVANLPKDYMITLKYVPG 60

QY      61  MDVLPCHWCISEMVVQLSDSLTLLDKFSNISEGLSNYSIIDKLWNIVDDIVECVKENS 120
DB      61  MDVLPCHWCISEMVVQLSDSLTLLDKFSNISEGLSNYSIIDKLWNIVDDIVECVKENS 120

QY      121  KDILKSFKSPERLPFTPEERFRFNRSIDAFKDFVVAASETSDCVVSSSTLSPEKDSRSVVT 180
DB      121  KDILKSFKSPERLPFTPEERFRFNRSIDAFKDFVVAASETSDCVVSSSTLSPEKDSRSVVT 180

QY      181  KPFWLPPVAAASSLRNDSSSSNSK 203
DB      181  KPFWLPPVAAASSLRNDSSSSNSRK 203

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RESULT 11  
US-08-482-918-49  
; Sequence 49, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Krisztina M.  
; APPLICANT: Boseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids

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; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-482-918-49

Query Match          97.1%; Score 1030; DB 2; Length 273;
Best Local Similarity 99.5%; Pred. No. 7.9e-98;
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTWILTCIYLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPCHWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLNVNVDLVECVKENS 120
Db 61 MDVLPCHWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLNVNVDLVECVKENS 120

QY 121 KDLKKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASSETDCVWSSTLSPEKDSRVSVT 180
Db 121 KDLKKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASSETDCVWSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSSSSNSK 203
Db 181 KPFMLPPVAASSLRNDSSSSNSK 203

RESULT 13
US-09-224-681-48
; Sequence 48, Application US/09224681
; Patent No. 6207454
; GENERAL INFORMATION:
; APPLICANT: Zsebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene
; TRANSFER WITH STEM CELL FACTOR (SCF) POLYPEPTIDE
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/224,681
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/005,893
; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
```

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; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX:
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-224-681-49

Query Match 97.1%; Score 1030; DB 2; Length 273;
Best Local Similarity 99.5%; Pred. No. 7.9e-98;
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0

QY 1 MKKTQTWILTCIYLQLLFNPLVKTEGICRNVTVNNVKDVKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWILTCIYLQLLFNPLVKTEGICRNVTVNNVKDVKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPCHWISSEMVVQLSDSLTDLKFNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120
DB 61 MDVLPCHWISSEMVVQLSDSLTDLKFNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120
QY 121 KDLKSKFSKPEPRLFTPEEFRIFNRSIDAFKDFVVASSTDCVVSSTLSPEKDSRVSVT 180
DB 121 KDLKSKFSKPEPRLFTPEEFRIFNRSIDAFKDFVVASSTDCVVSSTLSPEKDSRVSVT 180
QY 181 KPFMLPPVAASSLRNDSSSSNSK 203
DB 181 KPFMLPPVAASSLRNDSSSSNSK 203

RESULT 15
US-09-224-681-61
; Sequence 61, Application US/09224681
; Patent No. 6207454
; GENERAL INFORMATION:
; APPLICANT: Zsebo, Krisztina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene
; TRANSFER WITH STEM CELL FACTOR (SCF) POLYPEPTIDE
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/224,681
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA: 09/005,893
; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:

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;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/09/224,681  
;; FILING DATE:  
;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 09/005,893  
;; FILING DATE: 12-JAN-1998  
;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 08/449,653  
;; FILING DATE: 24-MAY-1995  
;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/982,255  
;; FILING DATE: 25-NOV-1992  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/589,701  
;; FILING DATE: 01-OCT-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/573,616  
;; FILING DATE: 24-AUG-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35199  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX:  
;; INFORMATION FOR SEQ ID NO: 61:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-09-224-681-61

Query Match 97.1%; Score 1030; DB 2; Length 273;  
Best Local Similarity 99.5%; Pred. No. 7.9e-98;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
  
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Db 1 MKKTQTWLTCTIYLOLLFNPLVKTGICRNVTVNNKDVTKLVANLPKQYMITLKYYPG 60  
  
Qy 61 MDVLPCHWISWVQVQSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPCHWISWVQVQSDSLTDLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
  
Qy 121 KDLKXFKSPKPEPRLFTPEFFRIFNRSIDAFKDFVVASGTSDCVVSSTLSPEKDSRVST 180  
Db 121 KDLKXFKSPKPEPRLFTPEFFRIFNRSIDAFKDFVVASGTSDCVVSSTLSPEKDSRVST 180  
  
Qy 181 KPFMLPPVAASSLRNDSSSSNK 203  
Db 181 KPFMLPPVAASSLRNDSSSSNRK 203

Search completed: February 22, 2006, 18:21:58  
Job time : 26.2121 secs

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GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:20:42 ; Search time 83.0854 Seconds  
(without alignments)  
1046.014 Million cell updates/sec

Title: US-10-620-642-46

Perfect score: 1061

Sequence: 1 MKKQTWLTCTIYLQLLFN.....AASSLRNDSSSSNKIYLI 208

Scoring table:

BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA\_Main:

- 1: /cgm2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep.\*
- 2: /cgm2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep.\*
- 3: /cgm2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep.\*
- 4: /cgm2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep.\*
- 5: /cgm2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep.\*
- 6: /cgm2\_6/ptodata/1/pubpaa/US11\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
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2	1061	100.0	208	3	US-09-224-683-46
3	1061	100.0	208	3	US-10-175-608-46
4	1061	100.0	208	5	US-10-620-642-46
5	1030	97.1	273	3	US-09-005-243-48
6	1030	97.1	273	3	US-09-005-243-49
7	1030	97.1	273	3	US-09-005-243-61
8	1030	97.1	273	3	US-09-224-683-48
9	1030	97.1	273	3	US-09-224-683-49
10	1030	97.1	273	3	US-09-224-683-61
11	1030	97.1	273	4	US-10-175-608-48
12	1030	97.1	273	4	US-10-175-608-49
13	1030	97.1	273	4	US-10-175-608-61
14	1030	97.1	273	5	US-10-620-642-48
15	1030	97.1	273	5	US-10-620-642-49
16	1030	97.1	273	5	US-10-620-642-61
17	1026	96.7	273	3	US-09-005-243-50
18	1026	96.7	273	3	US-09-224-683-50
19	1026	96.7	273	4	US-10-175-608-50
20	1026	96.7	273	5	US-10-620-642-50
21	920	86.7	266	3	US-09-005-243-57
22	920	86.7	266	3	US-09-224-683-57
23	920	86.7	266	4	US-10-175-608-57
24	920	86.7	266	5	US-10-620-642-57
25	890	83.9	245	3	US-09-005-243-63
26	890	83.9	245	3	US-09-224-683-63
27	890	83.9	245	4	US-10-175-608-63

28 890 83.9 245 5 US-10-688-845-87 Sequence 87, Appl  
29 890 83.9 245 5 US-10-620-642-63 Sequence 63, Appl  
30 884 83.3 271 3 US-09-005-243-52 Sequence 52, Appl  
31 884 83.3 271 3 US-09-224-683-52 Sequence 52, Appl  
32 884 83.3 271 4 US-10-175-608-52 Sequence 52, Appl  
33 884 83.3 271 5 US-10-620-642-52 Sequence 52, Appl  
34 875 82.5 273 3 US-09-005-243-53 Sequence 53, Appl  
35 875 82.5 273 3 US-09-224-683-53 Sequence 53, Appl  
36 875 82.5 273 4 US-10-175-608-53 Sequence 53, Appl  
37 875 82.5 273 5 US-10-620-642-53 Sequence 53, Appl  
38 865 81.5 195 3 US-09-005-243-44 Sequence 44, Appl  
39 865 81.5 195 3 US-09-224-683-44 Sequence 44, Appl  
40 865 81.5 195 4 US-10-175-608-44 Sequence 44, Appl  
41 865 81.5 195 5 US-10-620-642-44 Sequence 44, Appl  
42 862.5 81.3 274 3 US-09-005-243-51 Sequence 51, Appl  
43 862.5 81.3 274 4 US-09-224-683-51 Sequence 51, Appl  
44 862.5 81.3 274 4 US-10-175-608-51 Sequence 51, Appl  
45 862.5 81.3 274 5 US-10-620-642-51 Sequence 51, Appl

#### ALIGNMENTS

RESULT 1  
US-09-005-243-46  
; Sequence 46, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465

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; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 208 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-005-243-46

Query Match 100.0%; Score 1061; DB 3; Length 208;
Best Local Similarity 100.0%; Pred. No. 7.6e-92;
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 121 KDLKSKFSKSPRLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVST 180
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Db 181 KPFMLPPVAASLRNDSSSSNKIYILI 208

RESULT 2
US-09-224-683-46
; Sequence 46, Application US/09224683
; Patent No. US20020031491A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESS: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION NUMBER: US/09/224,683
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/005,893
; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701

;
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 208 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-005-243-46

Query Match 100.0%; Score 1061; DB 3; Length 208;
Best Local Similarity 100.0%; Pred. No. 7.6e-92;
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRRNRVTNNVDVTKLVANLPKDYMITLKYYPG 60
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Db 61 MDVLPSCWISWVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIIVDDLVCECKNSS 120
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Db 121 KDLKSKFSKSPRLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVST 180
QY 181 KPFMLPPVAASLRNDSSSSNKIYILI 208
Db 181 KPFMLPPVAASLRNDSSSSNKIYILI 208

RESULT 3
US-10-175-608-46
; Sequence 46, Application US/10175608
; Publication No. US2004018104A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESS: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION NUMBER: US/10/175,608
; FILING DATE: 16-Oct-2002
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CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 09/589,701  
FILING DATE: 10-OCT-1991  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 46:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 208 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 46:  
US-10-175-608-46  
Query Match 100.0%; Score 1061; DB 4; Length 208;  
Best Local Similarity 100.0%; Pred. No. 7.6e-92;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
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Db 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLDLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLDLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSFSPERLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVST 180  
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QY 181 KPFMLPPVAASLRNDSSSSSKYIYLI 208  
Db 181 KPFMLPPVAASLRNDSSSSSKYIYLI 208  
RESULT 4  
US-10-620-642-46  
Sequence 46, Application US/10620642  
Publication No. US20050080250A1  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago

STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/620,642  
FILING DATE: 16-Jul-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/10/175,608  
FILING DATE: 16-Oct-2002  
APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 09/589,701  
FILING DATE: 10-OCT-1991  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 46:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 208 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 46:  
US-10-620-642-46  
Query Match 100.0%; Score 1061; DB 5; Length 208;  
Best Local Similarity 100.0%; Pred. No. 7.6e-92;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLDLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLDLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSFSPERLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVST 180  
Db 121 KDLKSFSPERLFTPEFFRIFNRSIDAFKDFVVASETSCVWSSTLSPEKDSRVST 180  
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Db 181 KPFMLPPVAASLRNDSSSSSKYIYLI 208  
RESULT 5  
US-09-005-243-48

; Sequence 48, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 48:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-005-243-48

Query Match 97.1%; Score 1030; DB 3; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTLYQLLLFNPLVKTEGICRNVTNNKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTLYQLLLFNPLVKTEGICRNVTNNKDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLFCHWISBMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLFCHWISBMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKFSKPEPRLTPEEFRIFNRSIDAFKDFVASETSDCVVSSLTSPKDSRVSVT 180

DB 121 KDLKSKFSKPEPRLTPEEFRIFNRSIDAFKDFVASETSDCVVSSLTSPKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSSNSK 203  
DB 181 KPFMLPPVAASLRNDSSSSNRK 203  
RESULT 6  
US-09-005-243-49  
; Sequence 49, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
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; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-005-243-49  
Query Match 97.1%; Score 1030; DB 3; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;



;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35136  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: 25-3856  
;; INFORMATION FOR SEQ ID NO: 48:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-09-224-683-48

Query Match 97.1%; Score 1030; DB 3; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120

QY 121 KDLKSKFSKPEPRLTPEEFPFRFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSKPEPRLTPEEFPFRFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSNSSNK 203  
DB 181 KPFMLPPVAASSLRNDSNSSNK 203

RESULT 9  
US-09-224-683-49  
; Sequence 49, Application US/09224683  
; Patent No. US20020031491A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,683  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998

;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 08/449,653  
;; FILING DATE: 24-MAY-1995  
;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/982,255  
;; FILING DATE: 25-NOV-1992  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/589,701  
;; FILING DATE: 01-OCT-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/573,616  
;; FILING DATE: 24-AUG-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35136  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: 25-3856  
;; INFORMATION FOR SEQ ID NO: 49:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; STRANDEDNESS: single  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
US-09-224-683-49

Query Match 97.1%; Score 1030; DB 3; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVCEVKENSS 120

QY 121 KDLKSKFSKPEPRLTPEEFPFRFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSKPEPRLTPEEFPFRFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSNSSNK 203  
DB 181 KPFMLPPVAASSLRNDSNSSNK 203

RESULT 10  
US-09-224-683-61  
; Sequence 61, Application US/09224683  
; Patent No. US20020031491A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago

STATE: Illinois  
 COUNTRY: United States of America  
 ZIP: 60606-6402  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patent In Release #1.0, Version #1.30  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/09/224,683  
 FILING DATE:  
 CLASSIFICATION:  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 09/005,893  
 FILING DATE: 12-JAN-1998  
 CLASSIFICATION:  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 08/449,653  
 FILING DATE: 24-MAY-1995  
 CLASSIFICATION:  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/982,255  
 FILING DATE: 25-NOV-1992  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/589,701  
 FILING DATE: 01-OCT-1990  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/573,616  
 FILING DATE: 24-AUG-1990  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/537,198  
 FILING DATE: 11-JUN-1990  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 07/422,383  
 FILING DATE: 16-OCT-1989  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Clough, David W.  
 REGISTRATION NUMBER: 36,107  
 REFERENCE/DOCKET NUMBER: 01017/35136  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: 312/474-6300  
 TELEFAX: 312/474-0448  
 TELEX: 25-3856  
 INFORMATION FOR SEQ ID NO: 61:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 273 amino acids  
 TYPE: amino acid  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein  
 US-09-224-683-61

Query Match 97.1%; Score 1030; DB 3; Length 273;  
 Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
 Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQQLLFNPLVTEGICRRNVNNVDVTKLVANLPKDYMITLKYPG 60  
 DB 1 MKKTQTWLTCTIYLQQLLFNPLVTEGICRRNVNNVDVTKLVANLPKDYMITLKYPG 60  
 QY 61 MDVLPSCWISWMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIVDDLVECVKNS 120  
 DB 61 MDVLPSCWISWMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIVDDLVECVKNS 120  
 QY 121 KDLKSPKSPRLPTPEFRIFNRSIDAKDFVVASSETDCVVSSTLSPEKDSRVSVT 180  
 DB 121 KDLKSPKSPRLPTPEFRIFNRSIDAKDFVVASSETDCVVSSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSSNSK 203  
 DB 181 KPFMLPPVAASLRNDSSSSNSK 203

RESULT 11

US-10-175-608-48  
 Sequence 48, Application US/10175608  
 Publication No. US20040181044A1  
 GENERAL INFORMATION:  
 APPLICANT: Zeebo, Kristina M.  
 Bosselman, Robert A.  
 Suggs, Sidney V.  
 Martin, Francis H.  
 TITLE OF INVENTION: Stem Cell Factor  
 NUMBER OF SEQUENCES: 104  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 STREET: 6300 Sears Tower, 233 South Wacker Drive  
 CITY: Chicago  
 STATE: Illinois  
 COUNTRY: United States of America  
 ZIP: 60606-6402  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patent In Release #1.0, Version #1.30  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/10/175,608  
 FILING DATE: 16-Oct-2002  
 CLASSIFICATION: <Unknown>  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 09/635,249  
 FILING DATE: 07-AUG-2000  
 APPLICATION NUMBER: 09/486,546  
 FILING DATE: 24-MAY-1995  
 APPLICATION NUMBER: 08/172,329  
 FILING DATE: 21-DEC-1993  
 APPLICATION NUMBER: 07/982,255  
 FILING DATE: 25-NOV-1992  
 APPLICATION NUMBER: 07/684,535  
 FILING DATE: 10-APR-1991  
 APPLICATION NUMBER: 09/589,701  
 FILING DATE: 10-OCT-1991  
 APPLICATION NUMBER: 07/573,616  
 FILING DATE: 24-AUG-1990  
 APPLICATION NUMBER: 07/537,198  
 FILING DATE: 11-JUN-1990  
 APPLICATION NUMBER: 07/422,383  
 FILING DATE: 16-OCT-1989  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Clough, David W.  
 REGISTRATION NUMBER: 36,107  
 REFERENCE/DOCKET NUMBER: 01017/35199  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: 312/474-6300  
 TELEFAX: 312/474-0448  
 TELEX: <Unknown>  
 INFORMATION FOR SEQ ID NO: 48:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 273 amino acids  
 TYPE: amino acid  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein  
 SEQUENCE DESCRIPTION: SEQ ID NO: 48:  
 US-10-175-608-48

Query Match 97.1%; Score 1030; DB 4; Length 273;  
 Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
 Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQQLLFNPLVTEGICRRNVNNVDVTKLVANLPKDYMITLKYPG 60  
 DB 1 MKKTQTWLTCTIYLQQLLFNPLVTEGICRRNVNNVDVTKLVANLPKDYMITLKYPG 60  
 QY 61 MDVLPSCWISWMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIVDDLVECVKNS 120  
 DB 61 MDVLPSCWISWMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIVDDLVECVKNS 120

QY 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
 Db 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
 QY 181 KPFMLPPVAASSLRNDSSSSNSK 203  
 Db 181 KPFMLPPVAASSLRNDSSSSNSK 203  
 RESULT 12  
 US-10-175-608-49  
 ; Sequence 49, Application US/10175608  
 ; Publication No. US20040181044A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Zeebo, Kristina M.  
 ; Bosselman, Robert A.  
 ; Suggs, Sidney V.  
 ; Martin, Francis H.  
 ; TITLE OF INVENTION: Stem Cell Factor  
 ; NUMBER OF SEQUENCES: 104  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 ; STREET: 6300 Sears Tower, 233 South Wacker Drive  
 ; CITY: Chicago  
 ; STATE: Illinois  
 ; COUNTRY: United States of America  
 ; ZIP: 60606-6402  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent in Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/10/175,608  
 ; FILING DATE: 16-Oct-2002  
 ; CLASSIFICATION: <Unknown>  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 09/635,249  
 ; FILING DATE: 07-AUG-2000  
 ; APPLICATION NUMBER: 09/486,546  
 ; FILING DATE: 24-MAY-1995  
 ; APPLICATION NUMBER: 08/172,329  
 ; FILING DATE: 21-DEC-1993  
 ; APPLICATION NUMBER: 07/982,255  
 ; FILING DATE: 25-NOV-1992  
 ; APPLICATION NUMBER: 07/684,535  
 ; FILING DATE: 10-APR-1991  
 ; APPLICATION NUMBER: 09/589,701  
 ; FILING DATE: 10-OCT-1991  
 ; APPLICATION NUMBER: 07/573,616  
 ; FILING DATE: 24-AUG-1990  
 ; APPLICATION NUMBER: 07/537,198  
 ; FILING DATE: 11-JUN-1990  
 ; APPLICATION NUMBER: 07/422,383  
 ; FILING DATE: 16-OCT-1989  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Clough, David W.  
 ; REGISTRATION NUMBER: 36,107  
 ; REFERENCE/DOCKET NUMBER: 01017/35199  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 312/474-6300  
 ; TELEFAX: 312/474-0448  
 ; TELEX: <Unknown>  
 ; INFORMATION FOR SEQ ID NO: 49:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 273 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS: single  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
 ; US-10-175-608-49

Query Match 97.1%; Score 1030; DB 4; Length 273;  
 Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
 Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQALLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKTQTWLTCTIYLQALLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPBHCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYDDLVCECKENSS 120  
 Db 61 MDVLPBHCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIYDDLVCECKENSS 120  
 QY 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
 Db 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
 QY 181 KPFMLPPVAASSLRNDSSSSNSK 203  
 Db 181 KPFMLPPVAASSLRNDSSSSNSK 203  
 RESULT 13  
 US-10-175-608-61  
 ; Sequence 61, Application US/10175608  
 ; Publication No. US20040181044A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Zeebo, Kristina M.  
 ; Bosselman, Robert A.  
 ; Suggs, Sidney V.  
 ; Martin, Francis H.  
 ; TITLE OF INVENTION: Stem Cell Factor  
 ; NUMBER OF SEQUENCES: 104  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 ; STREET: 6300 Sears Tower, 233 South Wacker Drive  
 ; CITY: Chicago  
 ; STATE: Illinois  
 ; COUNTRY: United States of America  
 ; ZIP: 60606-6402  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent in Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/10/175,608  
 ; FILING DATE: 16-Oct-2002  
 ; CLASSIFICATION: <Unknown>  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 09/635,249  
 ; FILING DATE: 07-AUG-2000  
 ; APPLICATION NUMBER: 09/486,546  
 ; FILING DATE: 24-MAY-1995  
 ; APPLICATION NUMBER: 08/172,329  
 ; FILING DATE: 21-DEC-1993  
 ; APPLICATION NUMBER: 07/982,255  
 ; FILING DATE: 25-NOV-1992  
 ; APPLICATION NUMBER: 07/684,535  
 ; FILING DATE: 10-APR-1991  
 ; APPLICATION NUMBER: 09/589,701  
 ; FILING DATE: 10-OCT-1991  
 ; APPLICATION NUMBER: 07/573,616  
 ; FILING DATE: 24-AUG-1990  
 ; APPLICATION NUMBER: 07/537,198  
 ; FILING DATE: 11-JUN-1990  
 ; APPLICATION NUMBER: 07/422,383  
 ; FILING DATE: 16-OCT-1989  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Clough, David W.  
 ; REGISTRATION NUMBER: 36,107  
 ; REFERENCE/DOCKET NUMBER: 01017/35199  
 ; TELECOMMUNICATION INFORMATION:



TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 61:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-10-175-608-61

Query Match 97.1%; Score 1030; DB 4; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNVNNDVTKLVANLPKDYMTLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNVNNDVTKLVANLPKDYMTLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKFSKPEPRLTPPEFFRIFNRSIDAFKDFVVASSETDCVWSSTLSPEKDSRVST 180  
DB 121 KDLKSKFSKPEPRLTPPEFFRIFNRSIDAFKDFVVASSETDCVWSSTLSPEKDSRVST 180

QY 181 KPFMLPPVAASLRNDSSSNK 203  
DB 181 KPFMLPPVAASLRNDSSSNK 203

RESULT 14  
US-10-620-642-48  
Sequence 48, Application US/10620642  
Publication No. US2005080250A1  
GENERAL INFORMATION:  
APPLICANT: Zsebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/620,642  
FILING DATE: 16-Jul-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/10/175,608  
FILING DATE: 16-Oct-2002  
APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991

APPLICATION NUMBER: 09/589,701  
FILING DATE: 10-OCT-1991  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 48:  
US-10-620-642-48

Query Match 97.1%; Score 1030; DB 5; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNVNNDVTKLVANLPKDYMTLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNVNNDVTKLVANLPKDYMTLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKFSKPEPRLTPPEFFRIFNRSIDAFKDFVVASSETDCVWSSTLSPEKDSRVST 180  
DB 121 KDLKSKFSKPEPRLTPPEFFRIFNRSIDAFKDFVVASSETDCVWSSTLSPEKDSRVST 180

QY 181 KPFMLPPVAASLRNDSSSNK 203  
DB 181 KPFMLPPVAASLRNDSSSNK 203

RESULT 15  
US-10-620-642-49  
Sequence 49, Application US/10620642  
Publication No. US2005080250A1  
GENERAL INFORMATION:  
APPLICANT: Zsebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/620,642  
FILING DATE: 16-Jul-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/10/175,608  
FILING DATE: 16-Oct-2002  
APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991

;;  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US/10/175,608  
;; FILING DATE: 16-Oct-2002  
;; APPLICATION NUMBER: 09/635,249  
;; FILING DATE: 07-AUG-2000  
;; APPLICATION NUMBER: 09/486,546  
;; FILING DATE: 24-MAY-1995  
;; APPLICATION NUMBER: 08/172,329  
;; FILING DATE: 21-DEC-1993  
;; APPLICATION NUMBER: 07/982,255  
;; FILING DATE: 25-NOV-1992  
;; APPLICATION NUMBER: 07/684,535  
;; FILING DATE: 10-APR-1991  
;; APPLICATION NUMBER: 09/589,701  
;; FILING DATE: 10-OCT-1991  
;; APPLICATION NUMBER: 07/573,616  
;; FILING DATE: 24-AUG-1990  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35199  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: <Unknown>  
;; INFORMATION FOR SEQ ID NO: 49:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; STRANDEDNESS: single  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-10-620-642-49

Query Match 97.1%; Score 1030; DB 5; Length 273;  
Best Local Similarity 99.5%; Pred. No. 9.2e-89;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTYQLLLFNPLVKTEGICRNVTVNNKDVTKLVANLPKQYMITLKYYPG 60  
Db 1 MKKTQTWLTCTYQLLLFNPLVKTEGICRNVTVNNKDVTKLVANLPKQYMITLKYYPG 60  
QY 61 MDVLPCHWISVMVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPCHWISVMVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSFKSPERLTPPEFFRIFNRSIDAFKDFVVASSETDCVVSSTLSPEKDSRVST 180  
Db 121 KDLKSFKSPERLTPPEFFRIFNRSIDAFKDFVVASSETDCVVSSTLSPEKDSRVST 180  
QY 181 KPFMLPPVAASSLRNDSSSSNRK 203  
Db 181 KPFMLPPVAASSLRNDSSSSNRK 203

Search completed: February 22, 2006, 18:26:55  
Job time : 84.0854 secs

GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:22:17 ; Search time 8.02204 Seconds  
(without alignments)  
386.005 Million cell updates/sec

Title: US-10-620-642-46  
Perfect score: 1061  
Sequence: 1 MKTQTWLTCTIYLLQLLFN.....AASSLRNDSSSSNKIYLI 208

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 117670 seqs, 14887254 residues

Total number of hits satisfying chosen parameters: 117670

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Published Applications AA New:  
1: /cgn2\_6/ptodata/2/pubpaa/US08 NEW PUB.pap.\*  
2: /cgn2\_6/ptodata/2/pubpaa/US06 NEW PUB.pap.\*  
3: /cgn2\_6/ptodata/2/pubpaa/US07 NEW PUB.pap.\*  
4: /cgn2\_6/ptodata/2/pubpaa/PCT NEW PUB.pap.\*  
5: /cgn2\_6/ptodata/2/pubpaa/US09 NEW PUB.pap.\*  
6: /cgn2\_6/ptodata/2/pubpaa/US10 NEW PUB.pap.\*  
7: /cgn2\_6/ptodata/2/pubpaa/US11 NEW PUB.pap.\*  
8: /cgn2\_6/ptodata/2/pubpaa/US60 NEW PUB.pap.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1061	100.0	208	6	US-10-353-783-46 Sequence 46, Appl
2	1030	97.1	273	6	US-10-353-783-48 Sequence 48, Appl
3	1030	97.1	273	6	US-10-353-783-49 Sequence 49, Appl
4	1030	97.1	273	6	US-10-353-783-61 Sequence 61, Appl
5	1026	96.7	273	6	US-10-353-783-50 Sequence 50, Appl
6	920	86.7	266	6	US-10-353-783-57 Sequence 57, Appl
7	898	84.6	248	6	US-10-519-390-24 Sequence 24, Appl
8	898	84.6	248	7	US-11-176-830-206 Sequence 206, App
9	896	84.4	248	7	US-11-176-830-520 Sequence 520, App
10	896	84.4	248	7	US-11-176-830-537 Sequence 537, App
11	895	84.4	248	7	US-11-176-830-519 Sequence 519, App
12	895	84.4	248	7	US-11-176-830-529 Sequence 529, App
13	895	84.4	248	7	US-11-176-830-536 Sequence 536, App
14	895	84.4	248	7	US-11-176-830-538 Sequence 538, App
15	894	84.3	248	7	US-11-176-830-499 Sequence 499, App
16	894	84.3	248	7	US-11-176-830-500 Sequence 500, App
17	894	84.3	248	7	US-11-176-830-501 Sequence 501, App
18	894	84.3	248	7	US-11-176-830-513 Sequence 513, App
19	894	84.3	248	7	US-11-176-830-517 Sequence 517, App
20	894	84.3	248	7	US-11-176-830-521 Sequence 521, App
21	894	84.3	248	7	US-11-176-830-523 Sequence 523, App
22	894	84.3	248	7	US-11-176-830-527 Sequence 527, App
23	894	84.3	248	7	US-11-176-830-535 Sequence 535, App
24	893	84.2	248	7	US-11-176-830-502 Sequence 502, App
25	893	84.2	248	7	US-11-176-830-506 Sequence 506, App

RESULT 1

US-10-353-783-46  
; Sequence 46, Application US/10353783  
; Publication No. US20050261175A1

GENERAL INFORMATION:

APPLICANT: Zeebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.

TITLE OF INVENTION: Stem Cell Factor

NUMBER OF SEQUENCES: 104

CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/353,783

FILING DATE: 28-Jan-2003

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/448,729

FILING DATE: 24-MAY-1995

APPLICATION NUMBER: 08/172,329

FILING DATE: 21-DEC-1993

APPLICATION NUMBER: 07/982,255

FILING DATE: 25-NOV-1992

APPLICATION NUMBER: 07/684,535

FILING DATE: 10-APR-1991

APPLICATION NUMBER: 07/589,701

FILING DATE: 01-OCT-1990

APPLICATION NUMBER: 07/573,616

FILING DATE: 24-AUG-1990

APPLICATION NUMBER: 07/537,198

FILING DATE: 11-JUN-1990

APPLICATION NUMBER: 07/422,383

FILING DATE: 16-OCT-1989

ATTORNEY/AGENT INFORMATION:

NAME: Clough, David W.

REGISTRATION NUMBER: 36,107

REFERENCE/DOCKET NUMBER: 01017/32958A

ALIGNMENTS

26	893	84.2	248	7	US-11-176-830-508	Sequence 508, App
27	893	84.2	248	7	US-11-176-830-510	Sequence 510, App
28	893	84.2	248	7	US-11-176-830-512	Sequence 512, App
29	893	84.2	248	7	US-11-176-830-514	Sequence 514, App
30	893	84.2	248	7	US-11-176-830-518	Sequence 518, App
31	893	84.2	248	7	US-11-176-830-522	Sequence 522, App
32	893	84.2	248	7	US-11-176-830-524	Sequence 524, App
33	893	84.2	248	7	US-11-176-830-528	Sequence 528, App
34	893	84.2	248	7	US-11-176-830-530	Sequence 530, App
35	893	84.2	248	7	US-11-176-830-531	Sequence 531, App
36	893	84.2	248	7	US-11-176-830-534	Sequence 534, App
37	893	84.2	248	7	US-11-176-830-539	Sequence 539, App
38	893	84.2	248	7	US-11-176-830-540	Sequence 540, App
39	893	84.2	248	7	US-11-176-830-542	Sequence 542, App
40	892	84.1	248	7	US-11-176-830-505	Sequence 505, App
41	892	84.1	248	7	US-11-176-830-507	Sequence 507, App
42	892	84.1	248	7	US-11-176-830-509	Sequence 509, App
43	892	84.1	248	7	US-11-176-830-511	Sequence 511, App
44	892	84.1	248	7	US-11-176-830-515	Sequence 515, App
45	892	84.1	248	7	US-11-176-830-525	Sequence 525, App

TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 46:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 208 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 46:  
US-10-353-783-46

Query Match 100.0%; Score 1061; DB 6; Length 208;  
Best Local Similarity 100.0%; Pred. No. 8.5e-89;  
Matches 208; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYYPG 60  
DB 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYYPG 60

QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVKVCNKSS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVKVCNKSS 120

QY 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSSSNKYIYLI 208  
DB 181 KPFMLPPVAASSLRNDSSSNKYIYLI 208

## RESULT 2

US-10-353-783-48  
Sequence 48, Application US/10353783  
Publication No. US20050261175A1  
GENERAL INFORMATION:  
APPLICANT: Zsebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616

FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 48:  
US-10-353-783-48

Query Match 97.1%; Score 1030; DB 6; Length 273;  
Best Local Similarity 99.5%; Pred. No. 7.5e-86;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYYPG 60  
DB 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYYPG 60

QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVKVCNKSS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVKVCNKSS 120

QY 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSKPEPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSSSNK 203  
DB 181 KPFMLPPVAASSLRNDSSSNRK 203

RESULT 3  
US-10-353-783-49  
Sequence 49, Application US/10353783  
Publication No. US20050261175A1  
GENERAL INFORMATION:  
APPLICANT: Zsebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995

APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-10-353-783-49

Query Match 97.1%; Score 1030; DB 6; Length 273;  
Best Local Similarity 99.5%; Pred. No. 7.5e-86;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFPNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYQLLLFPNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
Db 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
QY 181 KPFMLPPVAASSLRNDSSSNK 203  
Db 181 KPFMLPPVAASSLRNDSSSNK 203

RESULT 4  
US-10-353-783-61  
; Sequence 61, Application US/10353783  
; Publication No. US20050261175A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-10-353-783-61

Query Match 97.1%; Score 1030; DB 6; Length 273;  
Best Local Similarity 99.5%; Pred. No. 7.5e-86;  
Matches 202; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFPNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYQLLLFPNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
Db 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVST 180  
QY 181 KPFMLPPVAASSLRNDSSSNK 203  
Db 181 KPFMLPPVAASSLRNDSSSNK 203

RESULT 5  
US-10-353-783-50  
; Sequence 50, Application US/10353783  
; Publication No. US20050261175A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104

; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 ; STREET: 6300 Sears Tower, 233 South Wacker Drive  
 ; CITY: Chicago  
 ; STATE: Illinois  
 ; COUNTRY: United States of America  
 ; ZIP: 60606-6402  
 ;  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent In Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/10/353,783  
 ; FILING DATE: 28-Jan-2003  
 ; CLASSIFICATION: <Unknown>  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 08/448,729  
 ; FILING DATE: 24-MAY-1995  
 ; APPLICATION NUMBER: 08/172,329  
 ; FILING DATE: 21-DEC-1993  
 ; APPLICATION NUMBER: 07/982,255  
 ; FILING DATE: 25-NOV-1992  
 ; APPLICATION NUMBER: 07/684,535  
 ; FILING DATE: 10-APR-1991  
 ; APPLICATION NUMBER: 07/589,701  
 ; FILING DATE: 01-OCT-1990  
 ; APPLICATION NUMBER: 07/573,616  
 ; FILING DATE: 24-AUG-1990  
 ; APPLICATION NUMBER: 07/537,198  
 ; FILING DATE: 11-JUN-1990  
 ; APPLICATION NUMBER: 07/422,383  
 ; FILING DATE: 16-OCT-1989  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Clough, David W.  
 ; REGISTRATION NUMBER: 36,107  
 ; REFERENCE/DOCKET NUMBER: 01017/32958A  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 312/474-6300  
 ; TELEFAX: 312/474-0448  
 ; TELEX: <Unknown>  
 ; INFORMATION FOR SEQ ID NO: 50:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 273 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS: single  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 50:  
 ;  
 ; US-10-353-783-50

Query Match 96.7%; Score 1026; DB 6; Length 273;  
 Best Local Similarity 99.0%; Pred. No. 1.7e-85;  
 Matches 201; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
 ;  
 QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPG 60  
 ;  
 Db 1 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPG 60  
 ;  
 QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120  
 ;  
 Db 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120  
 ;  
 QY 121 KDLKSFSPKPEPRLFTPEFFRIFNRSIDAFKDFVAVSETSPCVVSTLSPEKDSRVST 180  
 ;  
 Db 121 KDLKSFSPKPEPRLFTPEFFRIFNRSIDAFKDFVAVSETSPCVVSTLSPEKDSRVST 180  
 ;  
 QY 181 KPFMLPPVAASLRNDSSSNK 203  
 ;  
 Db 181 KPFMLPPVAASLRNDSSSNK 203

; US-10-353-783-57  
 ; Sequence 57, Application US/10353783  
 ; Publication No. US20050261175A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Zsebo, Kristina M.  
 ; Bosselman, Robert A.  
 ; Suggs, Sidney V.  
 ; Martin, Francis H.  
 ; TITLE OF INVENTION: Stem Cell Factor  
 ; NUMBER OF SEQUENCES: 104  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 ; STREET: 6300 Sears Tower, 233 South Wacker Drive  
 ; CITY: Chicago  
 ; STATE: Illinois  
 ; COUNTRY: United States of America  
 ; ZIP: 60606-6402  
 ;  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent In Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/10/353,783  
 ; FILING DATE: 28-Jan-2003  
 ; CLASSIFICATION: <Unknown>  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: 08/448,729  
 ; FILING DATE: 24-MAY-1995  
 ; APPLICATION NUMBER: 08/172,329  
 ; FILING DATE: 21-DEC-1993  
 ; APPLICATION NUMBER: 07/982,255  
 ; FILING DATE: 25-NOV-1992  
 ; APPLICATION NUMBER: 07/684,535  
 ; FILING DATE: 10-APR-1991  
 ; APPLICATION NUMBER: 07/589,701  
 ; FILING DATE: 01-OCT-1990  
 ; APPLICATION NUMBER: 07/573,616  
 ; FILING DATE: 24-AUG-1990  
 ; APPLICATION NUMBER: 07/537,198  
 ; FILING DATE: 11-JUN-1990  
 ; APPLICATION NUMBER: 07/422,383  
 ; FILING DATE: 16-OCT-1989  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Clough, David W.  
 ; REGISTRATION NUMBER: 36,107  
 ; REFERENCE/DOCKET NUMBER: 01017/32958A  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 312/474-6300  
 ; TELEFAX: 312/474-0448  
 ; TELEX: <Unknown>  
 ; INFORMATION FOR SEQ ID NO: 57:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 266 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS: single  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 57:  
 ;  
 ; US-10-353-783-57

Query Match 86.7%; Score 920; DB 6; Length 266;  
 Best Local Similarity 92.6%; Pred. No. 6e-76;  
 Matches 188; Conservative 7; Mismatches 4; Indels 4; Gaps 4;  
 ;  
 QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYPG 60  
 ;  
 Db 1 MKKTQTWLTCTIYQLQLLFNPLVKT-GICRNVTV-DVKDVTKLVANLPKDYMITLKYPG 58  
 ;  
 QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120  
 ;  
 Db 59 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCE-EENSS 117

RESULT 8  
 US-11-176-830-206  
 ; Sequence 206, Application US/11176830  
 ; Publication No. US2006020116A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gantier, Rene  
 ; APPLICANT: Guyon, Thierry  
 ; APPLICANT: Drittanti, Lila  
 ; APPLICANT: Vega, Manuel  
 ; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
 ; TITLE OF INVENTION: Acid Molecules and Related Applications  
 ; FILE REFERENCE: 17109-012002 (322B)  
 ; CURRENT APPLICATION NUMBER: US/11/176,830  
 ; CURRENT FILING DATE: 2005-07-06  
 ; PRIOR APPLICATION NUMBER: 10/658,834  
 ; PRIOR FILING DATE: 2003-09-08  
 ; PRIOR APPLICATION NUMBER: 60/457,135  
 ; PRIOR FILING DATE: 2003-03-21

[illegible]

;; PRIOR FILING DATE: 2003-09-09  
;;  
; PRIOR APPLICATION NUMBER: 6  
;  
PRIOR FILING DATE: 2003-03

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RESULT 10
US-11-176-830-537
; Sequence 537, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-03-21
; PRIOR FILING DATE: 2003-03-21
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 537
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-537

Query Match      84.4%; Score 896; DB 7; Length 248;
Best Local Similarity 98.9%; Pred. No. 8e-74;
Matches 176; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY      26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWISWVQVLSDSLTDLL 85
Db      1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWISWVQVLSDSLTDLL 60

QY      86 DKFNSISGLSNYSIIDKLNVIVDLVECVKENSCKDKKSKFSPPEPRLFTPEEPFRIFN 145
Db      61 DKFNSISGLSNYSIIDKLNVIVDLVECVKENSCKDKKSKFSPPEPRLFTPEEPFRIFN 120

QY      146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNSK 203
Db      121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNSK 178

RESULT 11
US-11-176-830-519
; Sequence 519, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-03-21
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 519
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-519

Query Match      84.4%; Score 896; DB 7; Length 248;
Best Local Similarity 98.9%; Pred. No. 8e-74;
Matches 176; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY      26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWISWVQVLSDSLTDLL 85
Db      1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWISWVQVLSDSLTDLL 60

QY      86 DKFNSISGLSNYSIIDKLNVIVDLVECVKENSCKDKKSKFSPPEPRLFTPEEPFRIFN 145
Db      61 DKFNSISGLSNYSIIDKLNVIVDLVECVKENSCKDKKSKFSPPEPRLFTPEEPFRIFN 120

QY      146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNSK 203
Db      121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNSK 178

RESULT 12
US-11-176-830-529
; Sequence 529, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-03-21
; PRIOR FILING DATE: 2003-03-21
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 529
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-529

Query Match      84.4%; Score 895; DB 7; Length 248;
Best Local Similarity 98.9%; Pred. No. 9.9e-74;
Matches 176; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY      26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWISWVQVLSDSLTDLL 85
Db      1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWISWVQVLSDSLTDLL 60

QY      86 DKFNSISGLSNYSIIDKLNVIVDLVECVKENSCKDKKSKFSPPEPRLFTPEEPFRIFN 145
Db      61 DKFNSISGLSNYSIIDKLNVIVDLVECVKENSCKDKKSKFSPPEPRLFTPEEPFRIFN 120

QY      146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNSK 203
Db      121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNSK 178

RESULT 13
US-11-176-830-536
; Sequence 536, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-09-08
; PRIOR FILING DATE: 2003-03-21
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 519
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-536
```



```
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 536
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-536

Query Match      84.4%; Score 895; DB 7; Length 248;
Best Local Similarity 98.9%; Pred. No. 9.9e-74;
Matches 176; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTGLVANLPKDYMITLKYPGMDVLPSCWISSEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTGLVANLPKDYMITLKYPGMDVLPSCWISSEMVVQLSDSLTDLL 60

QY 86 DKFSNISSEGLSNYSIIDKLNVIVDDIVECVKENSNDLKKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISSEGLSNYSIIDKLNVIVDDIVECVKENSNDLKKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVTKPFMLPPVAASSLNDSSSSNRK 203
DB 121 RSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVTKPFMLPPVAASSLNDSSSSNRK 178

RESULT 14
US-11-176-830-538
; Sequence 538, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 538
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-538
```

```
Query Match      84.4%; Score 895; DB 7; Length 248;
Best Local Similarity 98.9%; Pred. No. 9.9e-74;
Matches 176; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTGLVANLPKDYMITLKYPGMDVLPSCWISSEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTGLVANLPKDYMITLKYPGMDVLPSCWISSEMVVQLSDSLTDLL 60

QY 86 DKFSNISSEGLSNYSIIDKLNVIVDDIVECVKENSNDLKKSKSPKSPRLFTPEEPFRIFN 145
```

```
DB 61 DKFSNISSEGLSNYSIIDKLNVIVDDIVECVKENSNDLKKSKSPKSPRLFTPEEPFRIFN 120
QY 146 RSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVTKPFMLPPVAASSLNDSSSSNRK 203
DB 121 RSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVTKPFMLPPVAASSLNDSSSSNRK 178

RESULT 15
US-11-176-830-499
; Sequence 499, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 499
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-499
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```
Query Match      84.3%; Score 894; DB 7; Length 248;
Best Local Similarity 98.9%; Pred. No. 1.2e-73;
Matches 176; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTGLVANLPKDYMITLKYPGMDVLPSCWISSEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTGLVANLPKDYMITLKYPGMDVLPSCWISSEMVVQLSDSLTDLL 60

QY 86 DKFSNISSEGLSNYSIIDKLNVIVDDIVECVKENSNDLKKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISSEGLSNYSIIDKLNVIVDDIVECVKENSNDLKKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVTKPFMLPPVAASSLNDSSSSNRK 203
DB 121 RSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVTKPFMLPPVAASSLNDSSSSNRK 178
```

Search completed: February 22, 2006, 18:27:28  
Job time : 9.02204 secs

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GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.  
OM protein - protein search, using sw model  
Run on: February 22, 2006, 18:05:41 ; Search time 160.566 Seconds  
(without alignments)  
747.047 Million cell updates/sec  
Title: US-10-620-642-61  
Perfect score: 1397  
Sequence: 1 MKKTWTWLTCTYLLQLLPN.....NEEDNEISMLQKEREFEQV 273  
Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5  
Searched: 2443163 seqs, 439378781 residues  
Total number of hits satisfying chosen parameters: 2443163  
Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries  
Database : A\_Geneseq\_21.\*  
1: Geneseqp1980s.\*  
2: Geneseqp1990s.\*  
3: Geneseqp2000s.\*  
4: Geneseqp2001s.\*  
5: Geneseqp2002s.\*  
6: Geneseqp2003as.\*  
7: Geneseqp2003bs.\*  
8: Geneseqp2004s.\*  
9: Geneseqp2005s.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1397	100.0	273	2	AAR11711 Human Ste
2	1397	100.0	273	2	AAR20647 Human mas
3	1397	100.0	273	2	AAR83978 Human ste
4	1397	100.0	273	2	AAR27607 Human rec
5	1397	100.0	273	3	AAY53284 Human SCF
6	1397	100.0	273	4	AAB98367 Human SCF
7	1397	100.0	273	4	AAB98357 Human SCF
8	1397	100.0	273	4	AAB98357 Human SCF
9	1397	100.0	273	4	AAB96942 Human ste
10	1397	100.0	273	4	AAB96941 Human ste
11	1397	100.0	273	4	AAB96952 Human ste
12	1397	100.0	273	4	AAB73567 Human SCF
13	1397	100.0	273	4	AAB96942 Human ste
14	1397	100.0	273	4	AAB96942 Human ste
15	1397	100.0	273	5	AAB96942 Human SCF
16	1397	100.0	273	5	AAB96942 Human SCF
17	1397	100.0	273	7	ADRS2477 Human ste
18	1397	100.0	273	7	ADRS2489 Human ste
19	1397	100.0	273	7	ADRS2489 Human ste
20	1397	100.0	273	8	ADP99331 Human ste
21	1397	100.0	273	8	ADP99331 Human ste
22	1397	100.0	273	8	ADU50661 Human ste
23	1397	100.0	273	8	ADU50649 Human ste
24	1397	100.0	273	9	ADW93094 Human Ste

ALIGNMENTS

RESULT 1  
AAR11711  
ID AAR11711 standard; protein; 273 AA.  
XX  
AC AAR11711;  
XX  
DT 20-JUN-1991 (first entry)  
XX  
DE Human Stem Cell Factor from HT1080 fibrosarcoma line.  
XX  
KW Stem cell factor; SCF; leukopenia; AIDS; haematopoiesis.  
XX  
OS Homo sapiens.  
XX  
FH Key  
FT Peptide  
FT Protein  
FT Protein  
FT Protein  
PN EP423980-A.  
XX  
PD 24-APR-1991.  
XX  
XX 04-OCT-1990; 90EP-00310899.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 28-SEP-1990; 90WO-US005548.  
PR 01-OCT-1990; 90US-00589701.  
XX  
PA (AMGE-) AMGEN.  
XX  
XX Zsebo KM, Suggs SV, Bosselman RA, Martin FH;  
PI WPI; 1991-119233/17.  
XX  
DR N-PSDB; AAQ11542.  
XX  
XX New naturally-occurring polypeptide stem cell factor analogues - have  
PT haematopoietic biological activity of stem cell factor and are used to  
PT treat e.g. leukopenia, AIDS, nerve damage and infertility.  
XX  
XX Disclosure; Fig 42; 127pp; English.  
XX  
XX The SCF has the ability to stimulate growth of primitive progenitors  
CC including early hematopoietic progenitor cells and non- hematopoietic

25	1397	100.0	273	9	ADW93106 Human Ste
26	1397	100.0	273	9	ADZ47558 Human ste
27	1397	100.0	273	9	ADZ47546 Human ste
28	1392	99.6	273	4	AAB98356 Human ste
29	1392	99.6	273	4	AAB98356 Human ste
30	1392	99.6	273	4	AAB98356 Human ste
31	1392	99.6	273	4	AAB98356 Human ste
32	1392	99.6	273	4	AAB98356 Human ste
33	1392	99.6	273	5	AAB98356 Human ste
34	1392	99.6	273	7	ADRS2476 Human ste
35	1392	99.6	273	8	ADP99318 Human ste
36	1392	99.6	273	8	ADP99318 Human ste
37	1392	99.6	273	9	ADW93093 Human Ste
38	1392	99.6	273	9	ADZ47545 Human ste
39	1388	99.4	273	2	AAR32166 hK1 fragm
40	1382	98.9	283	8	ADRS98081 Protein f
41	1381	98.9	273	4	AAB98358 Monkey SC
42	1381	98.9	273	4	AAU02484 Monkey SC
43	1381	98.9	273	4	AAB73571 Monkey SC
44	1381	98.9	273	4	AAU02770 Monkey SC
45	1381	98.9	273	4	AAU05257 Monkey st

CC stem cells such as neural stem cells and primordial germ stem cells. The  
 CC product may be used in a pharmaceutical compen. for treating, in a  
 CC mammal, leukopenia, thrombocytopenia, anaemia, AIDS, neoplasia, nerve  
 CC damage, infertility and intestinal damage. See also AAR11708, AAQ11509-  
 CC Q11543  
 XX  
 SQ Sequence 273 AA;  
 Query Match 100.0%; Score 1397; DB 2; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
 QY 121 KDLKSKFSKSPPELPFTPEEFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
 DB 121 KDLKSKFSKSPPELPFTPEEFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
 DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
 QY 241 QPSLTRAVENTIINEEDNEISMLOKEREFOEV 273  
 DB 241 QPSLTRAVENTIINEEDNEISMLOKEREFOEV 273  
 RESULT 2  
 AAR20647  
 ID AAR20647 standard; protein; 273 AA.  
 XX  
 AC AAR20647;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 30-APR-1992 (first entry)  
 XX  
 DE Human mast cell growth factor.  
 XX  
 KW hMGF-2.4; hematopoietin; interleukin; IL-3; c-kit oncogene;  
 KW proliferation.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT Region /label= signal  
 FT Region 26..210  
 FT Region /label= extracellular  
 FT Region /note= "claimed polypeptide"  
 FT Region 211..237  
 FT Region /label= transmembrane  
 FT Region 238..273  
 FT Region /label= intracellular  
 XX  
 PN W09200376-A.  
 XX  
 XX  
 PD 09-JAN-1992.  
 XX  
 XX 25-JUN-1990; 90US-00543264.  
 XX  
 PR 25-JUN-1990; 90US-00543264.  
 PR 10-AUG-1990; 90US-00565840.  
 PR 28-AUG-1990; 90US-00574152.  
 PR 21-SEP-1990; 90US-00586073.  
 PR 12-JUN-1991; 91US-00713715.  
 XX  
 PA (IMMV ) IMMUNEX CORP.

XX Williams DE, Lyman S;  
 XX WPI; 1992-041558/05.  
 DR N-PSDB; AAQ20845.  
 XX  
 PT New isolated DNA encoding human mast cell growth factor - useful in  
 PT stimulating proliferation of haematopoietic cells with growth factor, to  
 PT treat haemolytic and hypoproliferative anaemias.  
 XX  
 PS Claim 10; Fig 4; 59pp; English.  
 XX  
 CC This human MGF has a mature extracellular region of 185 amino acids.  
 CC There is a second form of hMGF (see AAQ20844) resulting from an  
 CC alternative mRNA splicing event which deletes an exon encoding an  
 CC additional 28 amino acids beginning at amino acid 148 of the mature  
 CC protein. MGF is the ligand for the protein receptor expression product of  
 CC the c-kit proto-oncogene. MGF can be used to augment the activity of  
 CC other cytokines. It can influence early lymphoid or myeloid development.  
 CC See also AAQ20842-3 and AAQ22204-7. (Updated on 25-MAR-2003 to correct PA  
 CC field.)  
 XX  
 SQ Sequence 273 AA;  
 Query Match 100.0%; Score 1397; DB 2; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
 QY 121 KDLKSKFSKSPPELPFTPEEFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
 DB 121 KDLKSKFSKSPPELPFTPEEFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
 DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
 QY 241 QPSLTRAVENTIINEEDNEISMLOKEREFOEV 273  
 DB 241 QPSLTRAVENTIINEEDNEISMLOKEREFOEV 273  
 RESULT 3  
 AAR83978  
 ID AAR83978 standard; protein; 273 AA.  
 XX  
 AC AAR83978;  
 XX  
 DT 25-MAR-2003 (revised)  
 DT 15-MAY-1996 (first entry)  
 XX  
 DE Human stem cell factor derived from HT1080 fibrosarcoma cell line.  
 XX  
 KW Stem cell factor; progenitor; haematopoiesis; SCF; anaemia;  
 KW thrombocytopenia; leucopenia; AIDS; immunodeficiency; bone graft;  
 KW transplant; neoplasia; myelosuppression; bone marrow; ss.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT Region /label= sig\_peptide  
 FT Protein 26..248  
 FT Region /label= mat\_SCF  
 XX  
 PN EP676470-A1.

XX PD 11-OCT-1995.  
 XX PF 04-OCT-1990; 95EP-00105391.  
 XX PR 16-OCT-1989; 89US-004232383.  
 XX PR 11-JUN-1990; 90US-00537198.  
 XX PR 24-AUG-1990; 90US-00573616.  
 XX PR 28-SEP-1990; 90WO-US005548.  
 XX PR 01-OCT-1990; 90US-00589701.  
 XX PA (AMGE-) AMGEN INC.  
 XX PI Zsebo KM, Suggs SV, Bosselman RA, Martin FH;  
 XX DR WPI; 1995-346090/45.  
 XX DR N-PSDB; AAT04890.  
 XX PT New stem cell factor polypeptide(s) - for stimulating the growth of  
 XX PT primitive progenitor cells, esp. for treating disorders involving blood  
 XX PT cells.  
 XX PS Claim 9; Fig 42; 127pp; English.  
 XX PX AAR3978 is a human stem cell factor (SCF) derived from the HT1080  
 CC fibrosarcoma cell line. Non-naturally occurring SCF and C-terminally  
 CC truncated polypeptides, having amino acid sequences sufficiently  
 CC duplicative of naturally occurring SCF, stimulate growth of primitive  
 CC progenitors such as haematopoietic progenitor cells, neural stem cells  
 CC and primordial germ stem cells. The peptides can be used in a composition  
 CC for treating leucopenia, anaemia or thrombocytopenia, for enhancing  
 CC engraftment of bone marrow during transplantation or for bone marrow  
 CC recovery after chemotherapy or radiation-induced bone marrow aplasia or  
 CC myelosuppression. They can also be used for treating neoplasia, nerve  
 CC damage, infertility, intestinal damage or myeloproliferative disorders.  
 CC Antibodies may be raised against the peptides for use in detection or  
 CC neutralisation of SCF in serum. SCF may be useful for the treatment of  
 CC AIDS and severe combined immunodeficiency (SCID) states alone or in  
 CC combination with other factors such as IL-7. (Updated on 25-MAR-2003 to  
 CC correct PP field.)  
 XX SQ Sequence 273 AA;  
 Query Match 100.0%; Score 1397; DB 2; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPCHWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNI VDDLVECVKENS 120  
 DB 61 MDVLPCHWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNI VDDLVECVKENS 120  
 QY 121 KDLKSKFSKSPERLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPKDSRVSVT 180  
 DB 121 KDLKSKFSKSPERLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKRR 240  
 DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKRR 240  
 QY 241 QPSLTRAVENTIOINEDNEISMLOKEREFOEV 273  
 DB 241 QPSLTRAVENTIOINEDNEISMLOKEREFOEV 273  
 RESULT 4  
 ID AAW27607 standard; protein; 273 AA.  
 XX  
 AC AAW27607;

XX DT 28-APR-1998 (first entry)  
 XX DE Human recombinant stem cell factor protein.  
 XX KW Stem cell factor; SCF; mast cell growth factor; MCGF; Steel factor; SF;  
 KW SIF; analogue; treatment; haematopoietic factor; progenitor cell;  
 KW pigmentation disorder; haematopoietic disorder.  
 XX OS Homo sapiens.  
 XX FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT Protein /label= leader sequence  
 FT 26..274  
 FT /note= "mature full length stem cell factor protein"  
 XX W09738101-A1.  
 XX PD 16-OCT-1997.  
 XX PF 03-APR-1997; 97WO-US005541.  
 XX PR 05-APR-1996; 96US-00628428.  
 XX PA (AMGE-) AMGEN INC.  
 XX PI Lu HS;  
 XX DR WPI; 1997-512718/47.  
 XX PT Stem cell factor analogue N10D or N10D/N11D - useful to treat  
 XX PT pigmentation disorder, AIDS, nerve damage, infertility, intestinal damage  
 XX PT or haematopoietic disorder.  
 XX PX Claim 2; Fig 1; 42pp; English.  
 CC This sequence represents a membrane bound form of a human recombinant  
 CC stem cell factor (SCF). Stem cell factors are also known as mast cell  
 CC growth factors (MCGF) or Steel factors (SF or SLP) are haematopoietic  
 CC factors which act on haematopoietic progenitor cells. Analogues of a wild  
 CC type SCF sequence have been constructed (see AAW27605 and AAW27606) which  
 CC have increased biological activity and stability compared to unmodified  
 CC SCF and can be used to treat pigmentation disorders, e.g. vitilago, acquired  
 CC immunodeficiency syndrome, nerve damage, infertility, intestinal damage  
 CC or a haematopoietic disorder, e.g. leucopenia, thrombocytopenia or  
 CC anaemia, enhance bone marrow engraftment during transplantation or bone  
 CC marrow recovery following radiation, chemical or chemotherapeutic,  
 CC induced bone marrow aplasia or myelosuppression, sensitise cells to  
 CC chemotherapy or mobilise peripheral blood progenitor cells. It can also  
 CC be used in an in vitro haematopoietic cell, preferably bone marrow or  
 CC peripheral blood progenitor cell, culture medium, where the cells are  
 CC optionally subsequently transfected with exogenous DNA  
 XX SQ Sequence 273 AA;  
 Query Match 100.0%; Score 1397; DB 2; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPCHWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNI VDDLVECVKENS 120  
 DB 61 MDVLPCHWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNI VDDLVECVKENS 120  
 QY 121 KDLKSKFSKSPERLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPKDSRVSVT 180  
 DB 121 KDLKSKFSKSPERLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKRR 240

Db 181 KPFLPPVAAASLRNDSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAFGALYWKCR 240  
QY 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273  
RESULT 5  
AAAY53284  
ID AAAY53284 standard; protein; 273 AA.  
AC AAAY53284;  
XX 27-JUL-2000 (first entry)  
DT Human SCF protein isolated from the HT1080 fibrosarcoma cell line.  
DE Stem cell factor; SCF; haematopoietic progenitor cell; blood forming;  
KW primitive progenitor cell; haematopoietic disorder; syngeneic;  
KW allogeneic; autologous bone marrow transplant; gene therapy;  
KW transfection; haematopoietic stem cell; acute blood loss; neoplasia;  
KW cancer.  
XX Homo sapiens.  
OS  
XX  
PN EP992579-A1.  
XX  
PD 12-APR-2000.  
XX  
PF 04-OCT-1990; 99EP-00122861.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 28-SEP-1990; 90WO-US005548.  
PR 01-OCT-1990; 90US-00589701.  
PR 04-OCT-1990; 90EP-00310899.  
XX  
PA (AMGE-) AMGEN INC.  
XX  
PI Zsebo KM, Suggs SV, Bosselmann RA, Martin FH;  
XX WPI; 2000-259135/23.  
DR N-PSDB; AAA13714.  
XX  
PT Production of hematopoietic cells suitable for administration to a  
PT subject using progenitor cells and expanding the cells using stem cell  
PT factor.  
XX  
PS Claim 22; Fig 42; 123pp; English.  
XX  
CC A method has been developed of making haematopoietic cells suitable for  
CC administration to a subject. The method comprises: (a) obtaining  
CC haematopoietic progenitor cells from a donor; and (b) expanding the cells  
CC by adding to the cells a haematopoietically effective dose of a  
CC polypeptide product having at least part of the primary structural  
CC confirmation and one or more of the biological properties of naturally  
CC occurring stem cell factor (SCF). The method is useful for stimulating  
CC primitive progenitor cells including early haematopoietic progenitor  
CC cells which are capable of maturing to erythroid, megakaryocyte,  
CC granulocyte, lymphocyte and macrophage cells. SCF results in absolute  
CC increases in haematopoietic cells of both myeloid and lymphoid lineages.  
CC SCF is useful for treating haematopoietic disorders. The method is useful  
CC for expanding early haematopoietic progenitors in syngeneic, allogeneic  
CC or autologous bone marrow transplant. SCF is useful for enhancing the  
CC efficiency of gene therapy based on transfecting haematopoietic stem  
CC cells. SCF is also useful for combating the myelosuppressive effects of  
CC anti-HIV drugs such as AZT and for enhancing haematopoietic recovery  
CC after acute blood loss and as a boost to the immune system for fighting  
CC neoplasia (cancer). The present sequence represents a specifically  
CC claimed human SCF from the present invention  
XX

SQ Sequence 273 AA;  
Query Match 100.0%; Score 1397; DB 3; Length 273;  
Best Local Similarity 100.0%; Pred. No. 2.2e-133; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0;  
QY 1 MKKTOTWLTCTIYLQLLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTOTWLTCTIYLQLLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWVQVSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
Db 61 MDVLPSCWISWVQVSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKFKSPPEPRLFTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVST 180  
Db 121 KDLKSKFKSPPEPRLFTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVST 180  
QY 181 KPFLPPVAAASLRNDSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAFGALYWKCR 240  
Db 181 KPFLPPVAAASLRNDSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAFGALYWKCR 240  
QY 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273  
RESULT 6  
AAB98367  
ID AAB98367 standard; protein; 273 AA.  
XX  
AC AAB98367;  
XX  
DT 21-AUG-2001 (first entry)  
XX  
DE Human SCF protein sequence SEQ ID NO:61.  
XX  
KW Stem cell factor; SCF; stem cell factor receptor; blood cell disorder;  
KW gene therapy.  
XX  
OS Homo sapiens.  
XX  
PN US6207454-B1.  
XX  
PD 27-MAR-2001.  
XX  
PF 31-DEC-1998; 98US-00224681.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 01-OCT-1990; 90US-00589701.  
PR 25-NOV-1992; 92US-00982255.  
PR 21-DEC-1993; 93US-00172329.  
PR 24-MAY-1995; 95US-00449653.  
PR 12-JAN-1998; 98US-00005893.  
XX  
PA (AMGE-) AMGEN INC.  
XX  
PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
XX WPI; 2001-366062/38.  
DR N-PSDB; AAH41344.  
XX  
CC Enhancing efficiency of transfer of polynucleotide into a target  
CC mammalian cell in vitro, involves exposing cell that expresses a stem  
CC cell factor receptor to stem cell factor, and introducing polynucleotide  
CC into cell in vitro.  
XX  
CC Claim 17; Fig 42; 210pp; English.  
XX  
CC The present invention describes a method for enhancing (E) the efficiency  
CC of transfer of a polynucleotide (I) into a target mammalian cell (II) in

CC vitro, comprising exposing (II) that expresses a stem cell factor (SCF)  
 CC receptor to a biologically active SCF, its analogue or fragment, which  
 CC induces cell proliferation, and introducing (I) to (II) in vitro.  
 CC Exposure of SCF to (II) results in increased uptake of (I) into the cell.  
 CC The method is useful for enhancing the efficiency of the transfer of a  
 CC polynucleotide into a target mammalian cell in vitro. The method is  
 CC useful in gene therapy techniques. AAH41301 to AAH41364 and AAB98351 to  
 CC AAB98390 represent sequences used in the exemplification of the present  
 CC invention  
 XX Sequence 273 AA;

Query Match 100.0%; Score 1397; DB 4; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDIVECVKENS 120  
 Db 61 MDVLPSCWISSEMVVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDIVECVKENS 120  
 QY 121 KDLKSKFSKSPRLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVST 180  
 Db 121 KDLKSKFSKSPRLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVST 180  
 QY 181 KPFMLPPVAASLRNDSSSNKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
 Db 181 KPFMLPPVAASLRNDSSSNKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
 QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFEV 273  
 Db 241 QPSLTRAVENTIQINEEDNEISMLOKEREFEV 273

RESULT 7  
 AAB98357  
 ID AAB98357 standard; protein; 273 AA.  
 XX AC AAB98357;  
 XX DT 21-AUG-2001 (first entry)  
 XX DE Human SCF protein SEQ ID NO:49.  
 XX KW Stem cell factor; SCF; stem cell factor receptor; blood cell disorder;  
 KW gene therapy.  
 XX OS Homo sapiens.  
 XX PN US6207454-B1.  
 XX PD 27-MAR-2001.  
 XX PF 31-DEC-1998; 98US-00224681.  
 XX PR 16-OCT-1989; 89US-00422383.  
 XX PR 11-JUN-1990; 90US-00537198.  
 XX PR 24-AUG-1990; 90US-00573616.  
 XX PR 01-OCT-1990; 90US-00589701.  
 XX PR 25-NOV-1992; 92US-00982255.  
 XX PR 21-DEC-1993; 93US-00172329.  
 XX PR 24-MAY-1995; 95US-00449653.  
 XX PR 12-JAN-1998; 98US-00005893.  
 XX PA (AMGE-) AMGEN INC.  
 XX PI Zsebo KM, Bosselman RA, Suggs SV, Martin PH;  
 XX WPI; 2001-366062/38.  
 XX

PT Enhancing efficiency of transfer of polynucleotide into a target  
 PT mammalian cell in vitro, involves exposing cell that expresses a stem  
 PT cell factor receptor to stem cell factor, and introducing polynucleotide  
 XX into cell in vitro.  
 XX Example 3; Fig 16; 210pp; English.  
 PS The present invention describes a method for enhancing (E) the efficiency  
 CC of transfer of a polynucleotide (I) into a target mammalian cell (II) in  
 CC vitro, comprising exposing (II) that expresses a stem cell factor (SCF)  
 CC receptor to a biologically active SCF, its analogue or fragment, which  
 CC induces cell proliferation, and introducing (I) to (II) in vitro.  
 CC Exposure of SCF to (II) results in increased uptake of (I) into the cell.  
 CC The method is useful for enhancing the efficiency of the transfer of a  
 CC polynucleotide into a target mammalian cell in vitro. The method is  
 CC useful in gene therapy techniques. AAH41301 to AAH41364 and AAB98351 to  
 CC AAB98390 represent sequences used in the exemplification of the present  
 CC invention  
 XX Sequence 273 AA;

Query Match 100.0%; Score 1397; DB 4; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDIVECVKENS 120  
 Db 61 MDVLPSCWISSEMVVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDIVECVKENS 120  
 QY 121 KDLKSKFSKSPRLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVST 180  
 Db 121 KDLKSKFSKSPRLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSTLSPKDSRVST 180  
 QY 181 KPFMLPPVAASLRNDSSSNKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
 Db 181 KPFMLPPVAASLRNDSSSNKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
 QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFEV 273  
 Db 241 QPSLTRAVENTIQINEEDNEISMLOKEREFEV 273

RESULT 8  
 AAU02460  
 ID AAU02460 standard; protein; 273 AA.  
 XX AC AAU02460;  
 XX DT 29-AUG-2001 (first entry)  
 XX DE Human SCF protein isolated from the HT1080 fibrosarcoma cell line.  
 XX KW Human; stem cell factor; SCF; early haematopoietic progenitor cell;  
 KW blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;  
 KW anaemia; Kala azar; septicemia; malaria; hypopigmentation disorder;  
 KW HT1080 fibrosarcoma.  
 XX OS Homo sapiens.  
 XX FH Key Location/Qualifiers  
 FT Protein 1..25  
 FT /label= Signal\_peptide  
 FT 26..273  
 FT /label= Mature\_SCF  
 XX US6207417-B1.  
 XX PD 27-MAR-2001.  
 XX

PF 07-JUN-1995; 95US-00482918.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 01-OCT-1990; 90US-00589701.  
PR 21-DEC-1993; 93US-00172329.  
XX  
PA (ZSEB/) ZSEBO K M.  
PA (BOSS/) BOSSELMAN R A.  
PA (SUGG/) SUGGS S V.  
PA (MART/) MARTIN F H.  
XX  
PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
XX  
DR WPI; 2001-298941/31.  
DR N-PSDB; AAS04124.  
XX  
Novel nucleic acids encoding stem cell factor useful for treating  
PT disorders involving blood cells, e.g. leukemia, splenomegaly, Hodgkin's  
PT disease, Kala azar, anemia and septicemia.  
XX  
PS Example 5; Fig 42A-42C; 209pp; English.  
XX  
CC The present sequence representing human SCF (stem cell factor) protein is  
CC isolated from the HT1080 fibrosarcoma cell line. The present invention  
CC relates to novel stem cell factors (AAU02453-AAU02458, AAU02461) and the  
CC polynucleotides encoding them. SCF stimulate primitive progenitor cells  
CC including early haematopoietic progenitor cells. The invention also  
CC describes SCF peptides (AAU02462-AAU02481) and the oligonucleotides  
CC (AAS04081-AAS04117) used in the isolation of human and rat SCF sequences.  
CC The polynucleotide encoding SCF is useful for producing SCF and useful in  
CC gene therapy. It is useful for treating disorders involving blood cells  
CC such as myelofibrosis, metastatic carcinoma, acute leukaemia, multiple  
CC myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, anaemia,  
CC congestive splenomegaly, Kala azar, sarcoidosis, military tuberculosis,  
CC disseminated fungus disease, Fulminating septicemia, malaria, vitamin B12  
CC and folic acid deficiency, pyridoxine deficiency, and hypopigmentation  
CC disorders such as piebaldism and vitiligo  
XX  
SQ Sequence 273 AA;  
Query Match 100.0%; Score 1397; DB 4; Length 273;  
Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSFSPERLFTPEEFFRINRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
DB 121 KDLKSFSPERLFTPEEFFRINRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273  
DB 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273  
RESULT 9  
AAB96942  
ID AAB96942 standard; protein; 273 AA.  
XX  
AC AAB96942;  
XX

DT 13-JUL-2001 (first entry)  
XX  
DE Human stem cell factor SEQ ID NO: 49.  
XX  
KW Human; rat; mammal; stem cell factor; SCF; cell growth stimulation;  
KW gene therapy; haematopoietic disorder; aplastic anaemia; leukaemia;  
KW neurological damage; intestinal damage; infertility; AIDS; SCID;  
KW severe combined immunodeficiency.  
XX  
OS Homo sapiens.  
XX  
FN USG207802-B1.  
XX  
PD 27-MAR-2001.  
XX  
PF 09-NOV-1994; 94US-00336728.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 01-OCT-1990; 90US-00589701.  
PR 25-NOV-1992; 92US-00982255.  
XX  
PA (AMGE-) AMGEN INC.  
XX  
PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
XX  
DR WPI; 2001-353108/37.  
XX  
PT Novel isolated non-human mammalian stem cell factor polypeptide  
PT stimulating growth of early hematopoietic progenitor cells, useful for  
PT treating aplastic anemia, lymphoma, Letterer-Siwe disease, Kala azar,  
PT sarcoidosis.  
XX  
PS Example 3; Fig 16; 209pp; English.  
XX  
CC The present invention provides the protein and coding sequences of  
CC mammalian stem cell factors (SCFs). These are capable of stimulating the  
CC growth of early haematopoietic progenitor cells, neural stem cells and  
CC primordial germ stem cells. The sequences are useful in the treatment of  
CC leukaemias, haematopoietic disorders, aplastic anaemia, paroxysmal  
CC nocturnal haemoglobinuria, malaria, pigmentation disorders, neurological  
CC and intestinal damage, infertility, AIDS and severe combined  
CC immunodeficiency (SCID). The present sequence is an SCF described in the  
CC invention  
XX  
SQ Sequence 273 AA;  
Query Match 100.0%; Score 1397; DB 4; Length 273;  
Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSFSPERLFTPEEFFRINRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
DB 121 KDLKSFSPERLFTPEEFFRINRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273  
DB 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273



```

RESULT 10
AAB96941
ID AAB96941 standard; protein; 273 AA.
XX
AC AAB96941;
XX
DT 13-JUL-2001 (first entry)
XX
DE Human stem cell factor SEQ ID NO: 48.
XX
KW Human; rat; mammal; stem cell factor; SCF; cell growth stimulation;
KW gene therapy; haematopoietic disorder; aplastic anaemia; leukaemia;
KW neurological damage; intestinal damage; infertility; AIDS; SCID;
XX severe combined immunodeficiency.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..25
FT Protein /label= signal_peptide
FT 26..273
FT /label= mature_stem_cell_factor
XX
US6207802-B1.
XX
PD 27-MAR-2001.
XX
PF 09-NOV-1994; 94US-00336728.
XX
PR 16-OCT-1989; 89US-00422383.
XX
PR 11-JUN-1990; 90US-00537198.
XX
PR 24-AUG-1990; 90US-00573616.
XX
PR 01-OCT-1990; 90US-00589701.
XX
PR 25-NOV-1992; 92US-00982255.
XX
PA (AMGE-) AMGEN INC.
XX
PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;
XX
DR WPI; 2001-353108/37.
XX
DR N-PSDB; AAF89102.
XX
Novel isolated non-human mammalian stem cell factor polypeptide
stimulating growth of early hematopoietic progenitor cells, useful for
treating aplastic anemia, lymphoma, Letterer-Siwe disease, Kala azar,
sarcoidosis.
XX
PS Disclosure; Fig 15D; 209pp; English.
XX
The present invention provides the protein and coding sequences of
mammalian stem cell factors (SCFs). These are capable of stimulating the
growth of early haematopoietic progenitor cells, neural stem cells and
primordial germ stem cells. The sequences are useful in the treatment of
leukaemias, haematopoietic disorders, aplastic anaemia, paroxysmal
nocturnal haemoglobinuria, malaria, pigmentation disorders, neurological
and intestinal damage, infertility, AIDS and severe combined
immunodeficiency (SCID). The present sequence is an SCF described in the
invention
XX
Sequence 273 AA;
Query Match 100.0%; Score 1397; DB 4; Length 273;
Best Local Similarity 100.0%; Pred. No. 2.2e-133;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MKKTQTWLTCTYLLQLLFPNPLVKTGICRNRTNNVNDVTKLVANLPKDYMITLKYPG 60
DB 1 MKKTQTWLTCTYLLQLLFPNPLVKTGICRNRTNNVNDVTKLVANLPKDYMITLKYPG 60
QY 61 MDVLPSCWISWVQVLSLTDLDKFSNISEGLSNYSIIDKLVNVDLVECVKENS 120
DB 61 MDVLPSCWISWVQVLSLTDLDKFSNISEGLSNYSIIDKLVNVDLVECVKENS 120
QY 121 KDLKSKFKSPPEPRLFTPEFFPRFNRSIDAPKDFVVASETSCVVSSTLSPKDSRVSVT 180
DB 121 KDLKSKFKSPPEPRLFTPEFFPRFNRSIDAPKDFVVASETSCVVSSTLSPKDSRVSVT 180
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALPSLIIGFAPGALYWKKR 240
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALPSLIIGFAPGALYWKKR 240
QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFEQV 273
DB 241 QPSLTRAVENTIQINEEDNEISMLOKEREFEQV 273
XX
RESULT 11
AAB96952
ID AAB96952 standard; protein; 273 AA.
XX
AC AAB96952;
XX
DT 13-JUL-2001 (first entry)
XX
DE Human stem cell factor SEQ ID NO: 61.
XX
KW Human; rat; mammal; stem cell factor; SCF; cell growth stimulation;
KW gene therapy; haematopoietic disorder; aplastic anaemia; leukaemia;
KW neurological damage; intestinal damage; infertility; AIDS; SCID;
XX severe combined immunodeficiency.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..25
FT Protein /label= signal_peptide
FT 26..273
FT /label= mature_stem_cell_factor
XX
US6207802-B1.
XX
PD 27-MAR-2001.
XX
PF 09-NOV-1994; 94US-00336728.
XX
PR 16-OCT-1989; 89US-00422383.
XX
PR 11-JUN-1990; 90US-00537198.
XX
PR 24-AUG-1990; 90US-00573616.
XX
PR 01-OCT-1990; 90US-00589701.
XX
PR 25-NOV-1992; 92US-00982255.
XX
PA (AMGE-) AMGEN INC.
XX
PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;
XX
DR WPI; 2001-353108/37.
XX
DR N-PSDB; AAF89104.
XX
Novel isolated non-human mammalian stem cell factor polypeptide
stimulating growth of early hematopoietic progenitor cells, useful for
treating aplastic anemia, lymphoma, Letterer-Siwe disease, Kala azar,
sarcoidosis.
XX
PS Example 3; Fig 42; 209pp; English.
XX
The present invention provides the protein and coding sequences of
mammalian stem cell factors (SCFs). These are capable of stimulating the
growth of early haematopoietic progenitor cells, neural stem cells and
primordial germ stem cells. The sequences are useful in the treatment of
leukaemias, haematopoietic disorders, aplastic anaemia, paroxysmal
nocturnal haemoglobinuria, malaria, pigmentation disorders, neurological
and intestinal damage, infertility, AIDS and severe combined
immunodeficiency (SCID). The present sequence is an SCF described in the
invention
XX
Sequence 273 AA;

```

```
Query Match      100.0%; Score 1397; DB 4; Length 273;
Best Local Similarity 100.0%; Pred. No. 2.2e-133; Indels 0; Gaps 0;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWILTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDLVKVCNENSS 120
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDLVKVCNENSS 120

QY 121 KDLKSPKSPPEPRLFTPEEFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
DB 121 KDLKSPKSPPEPRLFTPEEFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASLRNDSSSNRKAQNPFGDSSLHWAAMALPALFSLIIGFAFGALYWKRR 240
DB 181 KPFMLPPVAASLRNDSSSNRKAQNPFGDSSLHWAAMALPALFSLIIGFAFGALYWKRR 240

QY 241 QPSLTRAVENTQINEEDNEISMLOKEREFOEV 273
DB 241 QPSLTRAVENTQINEEDNEISMLOKEREFOEV 273

RESULT 12
AAB73567
ID AAB73567 standard; protein; 273 AA.
AC AAB73567;
XX
XX 07-AUG-2001 (first entry)
DE Human SCF protein isolated from the HT1080 fibrosarcoma cell line.
KW Human; stem cell factor; SCF; early haematopoietic progenitor cell;
KW blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;
KW anaemia; Kala azar; septicemia; malaria; hypopigmentation disorder;
KW HT1080 fibrosarcoma.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Protein 1..25
FT /label= Signal_peptide
FT Protein 26..273
FT /label= Mature_SCF
XX
XX US6204363-B1.
XX
XX 20-MAR-2001.
XX
XX 25-NOV-1992; 92US-00982255.
XX
PR 16-OCT-1989; 89US-00422383.
PR 11-JUN-1990; 90US-00537198.
PR 24-AUG-1990; 90US-00573616.
PR 01-OCT-1990; 90US-00589701.
PR 10-APR-1991; 91US-00684535.
XX
XX (AMGE-) AMGEN INC.
XX
XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;
XX
XX WPI; 2001-256683/26.
XX
XX N-P5DB; AAB23901.
XX
XX New stem cell factor polypeptides and their analogs which stimulate
XX growth of early hematopoietic progenitors, useful for treating aplastic
XX anemia, carcinoma, multiple myeloma, vitiligo, kala azar, Hodgkin's
XX disease.
```

```
PS Claim 7; Fig 42A-42C; 166pp; English.
XX
CC The present sequence representing human SCF (stem cell factor) protein is
CC isolated from the HT1080 fibrosarcoma cell line. The present invention
CC relates to novel stem cell factors (AAB73561-AAB73568, AAB73571-AAB73576)
CC and the polynucleotides encoding them. SCF stimulate primitive progenitor
CC cells including early haematopoietic progenitor cells. The invention also
CC describes SCF peptides (AAB73578-AAB73597) and the oligonucleotides
CC (AAH23859-AAH23895) used in the isolation of human and rat SCF sequences.
CC The polynucleotide encoding SCF is useful for producing SCF and useful in
CC gene therapy. It is useful for treating disorders involving blood cells
CC such as myelofibrosis, metastatic carcinoma, acute leukaemia, multiple
CC myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, anaemia,
CC congestive splenomegaly, Kala azar, sarcoidosis, military tuberculosis,
CC disseminated fungus disease, Fulminating septicemia, malaria, vitamin
CC B12 and folic acid deficiency, Pyridoxine deficiency, and
CC hypopigmentation disorders such as piebaldism and vitiligo
XX
SQ Sequence 273 AA;
Query Match      100.0%; Score 1397; DB 4; Length 273;
Best Local Similarity 100.0%; Pred. No. 2.2e-133; Indels 0; Gaps 0;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWILTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDLVKVCNENSS 120
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDLVKVCNENSS 120

QY 121 KDLKSPKSPPEPRLFTPEEFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
DB 121 KDLKSPKSPPEPRLFTPEEFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASLRNDSSSNRKAQNPFGDSSLHWAAMALPALFSLIIGFAFGALYWKRR 240
DB 181 KPFMLPPVAASLRNDSSSNRKAQNPFGDSSLHWAAMALPALFSLIIGFAFGALYWKRR 240

QY 241 QPSLTRAVENTQINEEDNEISMLOKEREFOEV 273
DB 241 QPSLTRAVENTQINEEDNEISMLOKEREFOEV 273

RESULT 13
AAU02766
ID AAU02766 standard; protein; 273 AA.
XX
XX AAU02766;
XX
XX 29-AUG-2001 (first entry)
XX
XX Human SCF protein isolated from the HT1080 fibrosarcoma cell line.
XX
XX Human; stem cell factor; SCF; early haematopoietic progenitor cell;
XX blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;
XX anaemia; Kala azar; septicemia; malaria; hypopigmentation disorder;
XX HT1080 fibrosarcoma.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX FT Protein 1..25
XX FT /label= Signal_peptide
XX FT Protein 26..273
XX FT /label= Mature_SCF
XX
XX US6218148-B1.
XX
XX 17-APR-2001.
XX
XX 21-DEC-1993; 93US-00172329.
```

XX 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 25-NOV-1992; 92US-00982255.  
 XX (AMGE-) AMGEN INC.  
 XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 DR WPI: 2001-281051/29.  
 DR N-PSDB; AAS04224.  
 XX Isolated DNA sequence, encoding polypeptide product useful for  
 PT stimulating growth of early hematopoietic progenitor cells.  
 PS Example 5; Fig 42A-42C; 167pp; English.  
 XX The present sequence representing human SCF (stem cell factor) protein is  
 CC isolated from the HT1080 fibrosarcoma cell line. The present invention  
 CC relates to novel stem cell factors (AAU02761-AAU02767, AAU02770-AAU02775,  
 CC AAU02797) and the polynucleotides encoding them. SCF stimulate primitive  
 CC progenitor cells including early hematopoietic progenitor cells. The  
 CC invention also describes SCF peptides (AAU02777-AAU02794) and the  
 CC oligonucleotides (AAS04182-AAS04218) used in the isolation of human and  
 CC rat SCF sequences. The polynucleotide encoding SCF is useful for  
 CC producing SCF and useful in gene therapy. It is useful for treating  
 CC disorders involving blood cells such as myelofibrosis, metastatic  
 CC carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease,  
 CC lymphoma, Gaucher's disease, anaemia, congestive splenomegaly, Kala azar,  
 CC sarcoidosis, military tuberculosis, disseminated fungus disease,  
 CC Fulminating septicemia, malaria, vitamin B12 and folic acid deficiency,  
 CC pyridoxine deficiency, and hypopigmentation disorders such as piebaldism  
 CC and vitiligo  
 XX Sequence 273 AA;  
 SQ

Query Match 100.0%; Score 1397; DB 4; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYLQLLLPNPLVKTEGICRNRTNNVNDVKLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQTWILTCIYLQLLLPNPLVKTEGICRNRTNNVNDVKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPBHCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120  
 DB 61 MDVLPBHCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120

QY 121 KDLKSKSPKPELFTPEFFRIFNRSIDAFKDFVVASETSCVSVSTLSPKDSRVST 180  
 DB 121 KDLKSKSPKPELFTPEFFRIFNRSIDAFKDFVVASETSCVSVSTLSPKDSRVST 180

QY 181 KPFMLPPVAASLRNDSNNKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKKR 240  
 DB 181 KPFMLPPVAASLRNDSNNKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKKR 240

QY 241 QPSLTRAVENIQINEEDNEISMLOKEREFOEV 273  
 DB 241 QPSLTRAVENIQINEEDNEISMLOKEREFOEV 273

RESULT 14  
 AAU05266  
 ID AAU05266 standard; protein; 273 AA.  
 XX AC  
 XX AAU05266;  
 XX  
 XX 24-OCT-2001 (first entry)  
 XX  
 XX Human SCF protein isolated from the HT1080 fibrosarcoma cell line.  
 DE  
 XX

KW Human; stem cell factor; SCF; hematopoietic progenitor cell; AIDS;  
 KW blood disorder; Hodgkin's disease; vitamin B12; folic acid deficiency;  
 XX hypopigmentation disorder; viral disorder; HT1080 fibrosarcoma.  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Protein 1..25  
 FT Protein /label= Signal\_peptide  
 FT Protein 26..273  
 FT Protein /label= Mature\_SCF  
 FT Misc-difference 97 /note= "Encoded by ATT"  
 FT Misc-difference 258 /note= "Encoded by ATT"  
 FT  
 XX US6248319-B1.  
 XX  
 XX 19-JUN-2001.  
 XX  
 XX 24-MAY-1995; 95US-00449653.  
 XX  
 PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 10-OCT-1991; 91US-00684535.  
 PR 25-NOV-1992; 92US-00982255.  
 PR 21-DEC-1993; 93US-00172329.  
 XX (ZSEB/) ZSEBO K M.  
 PA (BOSS/) BOSSELMAN R A.  
 PA (SUGG/) SUGGS S V.  
 PA (MART/) MARTIN F H.  
 XX  
 PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 XX  
 DR WPI: 2001-407312/43.  
 DR N-PSDB; AAS10461.  
 XX  
 PT Increasing the number of early hematopoietic progenitor cells in the  
 PT peripheral blood useful for the treatment of blood disorders including  
 PT Hodgkin's disease comprises the administration of human stem cell factor.  
 XX  
 PS Example 3; Fig 42; 210pp; English.  
 XX  
 CC The present sequence represents human stem cell factor (SCF). The cDNA  
 CC encoding this sequence is isolated from the HT1080 fibrosarcoma cell  
 CC line. The sequence is described in an invention relating to novel stem  
 CC cell factors, the polynucleotides encoding them and methods for producing  
 CC the stem cell factors. The methods involve increasing the number of early  
 CC hematopoietic progenitor cells in human peripheral blood by  
 CC administering a hematopoietically effective human stem cell factor  
 CC polypeptide. The methods are useful for the treatment of blood disorders,  
 CC including myelofibrosis, myelocytosis, osteopetrosis, metastatic  
 CC carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease,  
 CC lymphoma, Gaucher's disease, Niemann-Pick disease, refractory anaemia,  
 CC malaria, vitamin B12 and folic acid deficiency, hypopigmentation  
 CC disorders i.e. piebaldism and viral induced disorders, including AIDS  
 XX  
 SQ Sequence 273 AA;  
 Query Match 100.0%; Score 1397; DB 4; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 2.2e-133;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYLQLLLPNPLVKTEGICRNRTNNVNDVKLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQTWILTCIYLQLLLPNPLVKTEGICRNRTNNVNDVKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPBHCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120  
 DB 61 MDVLPBHCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVCEVKENS 120

QY 121 KDLKSKSPKSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
 Db 121 KDLKSKSPKSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180  
 QY 181 KPFMLPPVAASLRNDSSSSNRKAKNPQDSSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
 Db 181 KPFMLPPVAASLRNDSSSSNRKAKNPQDSSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
 QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273  
 Db 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

RESULT 15

AAE22326

ID AAE22326 standard; protein; 273 AA.

XX AC AAE22326;

DT 25-JUL-2002 (first entry)

DE Human SCF protein #2.

XX KW Human; stem cell factor; SCF protein; leucopaenia; thrombocytopaenia;

XX KW anaemia; myelosuppression; nerve damage; myeloproliferative disorder;  
 XX KW infertility; neoplasia; myelofibrosis; myeloclerosis; osteopetrosis;  
 XX KW metastatic carcinoma; acute leukaemia; multiple myeloma; sarcoidosis;  
 XX KW Hodgkin's disease; lymphoma; Gaucher's disease; Niemann-Pick disease;  
 XX KW Letterer-Siwe disease; refractory erythroblastic anaemia; Kala azar;  
 XX KW Di Guglielmo syndrome; congestive splenomegaly; splenic pancytopenia;  
 XX KW disseminated fungus disease; Fulminating septicaemia; piebaldism; AIDS;  
 XX KW acquired immune deficiency syndrome; malaria; military tuberculosis;  
 XX KW pyridoxine deficiency; vitamin B12 deficiency; folic acid deficiency;  
 XX KW Diamond Blackfan anaemia; hypopigmentation disorder; vitiligo.

OS Homo sapiens.

XX FH Key Location/Qualifiers

FT Peptide 1..25

FT /label= Signal\_peptide

FT Protein 26..273

FT /note= "Mature human SCF protein"

XX US2002018763-A1.

XX PD 14-FEB-2002.

XX PF 12-JAN-1998; 98US-00005243.

XX PR 24-MAY-1995; 95US-00449653.

XX (ZSEB/) ZSEBO K M.

PA (BOSS/) BOSSELMAN R A.

PA (SUGG/) SUGGS S V.

PA (MART/) MARTIN F H.

PI Zsebo KM, BosseLMAN RA, Suggs SV, Martin FH;

XX WPI; 2002-350789/38.

DR N-PSDB; AAD35477.

XX Novel non-naturally-occurring stem cell factor polypeptide, useful for  
 PT treating leucopenia, thrombocytopenia, anemia and for enhancing  
 PT engraftment of bone marrow during transplantation in a mammal.

XX Claim 9; Fig 42; 217pp; English.

XX The present invention relates to novel non-naturally-occurring stem cell  
 CC factor (SCF) polypeptides having an amino acid sequence sufficient  
 CC duplicative of that of naturally-occurring SCF to allow possession of  
 CC haematopoietic biological activity of naturally occurring SCF. Sequences  
 CC of the invention are useful for treating leucopaenia, thrombocytopaenia,

CC anaemia and for enhancing bone marrow recovery in treatment of radiation,  
 CC engraftment of bone marrow during transplantation in mammals and chemical  
 CC or chemotherapeutic induced bone marrow aplasia or myelosuppression. They  
 CC are also useful for treating acquired immune deficiency in a human, nerve  
 CC damage, neoplasia, infertility, myeloproliferative disorder, intestinal  
 CC damage in a mammal. SCF sequences are useful for preparing biologically  
 CC active polymer polypeptide adduct, for enhancing transfection of early  
 CC haematopoietic progenitor cells with a gene, and transfer of a gene into  
 CC a mammal. They are useful for treating myelofibrosis, myeloclerosis,  
 CC osteopetrosis, metastatic carcinoma, acute leukaemia, multiple myeloma,  
 CC Hodgkin's disease, lymphoma, Gaucher's disease, Niemann-Pick disease,  
 CC Letterer-Siwe disease, refractory erythroblastic anaemia, Di Guglielmo  
 CC syndrome, congestive splenomegaly, Kala azar, sarcoidosis, primary  
 CC splenic pancytopenia, disseminated fungus disease, malaria, military  
 CC tuberculosis, Fulminating septicaemia, pyridoxine deficiency, vitamin B12  
 CC and folic acid deficiency, Diamond Blackfan anaemia, hypopigmentation  
 CC disorders such as piebaldism, AIDS (acquired immune deficiency syndrome)  
 CC and vitiligo. The present sequence is human SCF protein

XX SQ Sequence 273 AA;

Query Match 100.0%; Score 1397; DB 5; Length 273;

Best Local Similarity 100.0%; Pred. No. 2.2e-133;

Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTCYLQLLLFNLVKTGICRRNVNNVKDVKLVANLPKDYMITLKYVPG 60

Db 1 MKKTQTWLTCTCYLQLLLFNLVKTGICRRNVNNVKDVKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSSHCHWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVINIVDDLVECVKENS 120

Db 61 MDVLPSSHCHWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVINIVDDLVECVKENS 120

QY 121 KDLKSKSPKSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180

Db 121 KDLKSKSPKSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASLRNDSSSSNRKAKNPQDSSLHWAAMALPALFSLIIGFAFGALYWKCR 240

Db 181 KPFMLPPVAASLRNDSSSSNRKAKNPQDSSLHWAAMALPALFSLIIGFAFGALYWKCR 240

QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

Db 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

Search completed: February 22, 2006, 18:13:00

Job time : 161.566 secs

GenCore version 5.1.7  
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OM protein - protein search, using sw model

Run on: February 22, 2006, 18:13:23 ; Search time 22.562 Seconds  
(without alignments)  
1164.223 Million cell updates/sec

Title: US-10-620-642-61  
Perfect score: 1397  
Sequence: 1 MKKTQWLTTCIYIQLLFLN.....NEEDNEISMLQKREPOEV 273

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues  
Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : PIR 80+\*  
1: pir1:\*  
2: pir2:\*  
3: pir3:\*  
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	1231	88.1	245	2	B61190
3	1203.5	86.1	274	2	I46575
4	1184.5	84.8	274	2	S47571
5	1180.5	84.5	274	2	I46929
6	1157	82.8	273	2	S65801
7	991	70.9	245	2	A37934
8	885.5	63.4	202	2	S58313
9	857	61.3	201	2	B35974
10	703	50.3	287	2	JN0637
11	702	50.3	287	2	S70366
12	589	42.2	253	2	S70367
13	576.5	41.3	124	2	S29052
14	175.5	12.6	51	2	B35971
15	172.5	12.3	49	2	A35971
16	106	7.6	465	2	H97165
17	101	7.2	1490	2	T16086
18	100.5	7.2	402	2	T09062
19	100.5	7.2	647	2	F90595
20	97.5	7.0	1107	2	S61667
21	97	6.9	1447	2	F82909
22	95.5	6.8	484	2	T25944
23	95.5	6.8	614	2	B86461
24	93.5	6.7	1293	2	T27886
25	93.5	6.7	1813	2	T19295
26	92.5	6.6	164	2	B69616
27	92.5	6.6	246	2	T19850
28	92.5	6.6	398	2	I53340
29	92.5	6.6	512	2	G86773

30	91.5	6.5	575	2	D84668	hypothetical prote
31	91.5	6.5	767	2	T19690	hypothetical prote
32	90.5	6.5	251	2	B86647	hypothetical prote
33	90.5	6.5	616	2	A69136	ATP-dependent Clp
34	90.5	6.5	1425	2	E89303	protein C47E8.8 [i
35	90.5	6.5	1675	2	T31473	hypothetical prote
36	90	6.4	378	2	F64300	formate dehydrogen
37	90	6.4	774	2	T32987	hypothetical prote
38	89.5	6.4	2100	2	T38128	t7123.15 protein -
39	89.5	6.4	268	2	G81257	probable hemein up
40	89.5	6.4	335	2	S44922	K18 antigen - Enta
41	89.5	6.4	384	2	H64161	hypothetical prote
42	89	6.4	242	2	T27226	hypothetical prote
43	89	6.4	292	2	B17333	hypothetical prote
44	89	6.4	982	2	T15967	hypothetical prote
45	88.5	6.3	378	2	T25672	hypothetical prote

## ALIGNMENTS

### RESULT 1

A35974  
mast cell growth factor precursor - human  
N:Alternate names: kit ligand; stem cell factor  
C:Species: Homo sapiens (man)  
C>Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004  
C:Accession: A35974; A61190  
R:Martin, F.H.; Suggs, S.V.; Langley, K.E.; Lu, H.S.; Ting, J.; Okino, K.H.; Morris, C.F.  
B:J.C.; Patel, A.C.; Fisher, E.F.; Erjavec, H.O.; Herrera, C.J.; Wypych, J.; Sachdev, R.  
Cell 63, 203-211, 1990  
A>Title: Primary structure and functional expression of rat and human stem cell factor [L  
A:Reference number: A35974; MUID:91004219; PMID:2208279  
A:Accession: A35974  
A:Molecule type: mRNA  
A:Residues: 1-273 <MAR>  
A:Cross-references: UNIPROT:P21583; UNIPARC:UPI000002D482; GB:M59964; NID:9337933; PIDN  
R:Anderson, D.M.; Williams, D.E.; Tushinski, R.; Gimpel, S.; Eisenman, J.; Cannizzaro, J.  
Cell Growth Differ. 2, 373-378, 1991  
A>Title: Alternate splicing of mRNAs encoding human mast cell growth factor and localiza  
A:Reference number: A61190; MUID:92172791; PMID:1724381  
A:Accession: A61190  
A>Status: nucleic acid sequence not shown; not compared with conceptual translation  
A:Molecule type: mRNA  
A:Residues: 1-273 <AND>  
A:Cross-references: UNIPARC:UPI000002D482  
C:Genetics:  
A:Gene: GDB:MGF  
A:Cross-references: GDB:128026; OMIM:184745  
A:Map position: 12q22-12q22  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: alternative splicing; extracellular protein; glycoprotein; transmembrane pro  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-273/Product: mast cell growth factor #status predicted <MCS>  
F:26-189/Product: (or 26-190) mast cell growth factor, soluble form #status predicted <I  
F:215-237/Domain: Transmembrane #status predicted <TM>  
F:90,97,118,145,195/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 2e-101;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	MKKTQWLTTCIYIQLLFLNPLVKTEGICRNRVTNNVKDVKLVANLPKDYMITLKYYVPG 60
DB	1	MKKTQWLTTCIYIQLLFLNPLVKTEGICRNRVTNNVKDVKLVANLPKDYMITLKYYVPG 60
QY	61	MDVLPSCWISSEMVVQLSDSLTDLDFKFSNYSIIIDKLVINIIVDDLVECKVKNSS 120
DB	61	MDVLPSCWISSEMVVQLSDSLTDLDFKFSNYSIIIDKLVINIIVDDLVECKVKNSS 120
QY	121	KDLKKSFKSPBPRILFTPEEPFRIFNRSIDAPKDFVASETSDCVSVSTLSPEKDSRVSVT 180
DB	121	KDLKKSFKSPBPRILFTPEEPFRIFNRSIDAPKDFVASETSDCVSVSTLSPEKDSRVSVT 180

```
QY 181 KPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240
DB 181 KPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240

QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

RESULT 2
B61190
mast cell growth factor, short form precursor - human
N:Alternate names: kit ligand, short form; stem cell factor, short form
C:Species: Homo sapiens (man)
C>Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 09-Jul-2004
C:Accession: B61190
R:Anderson, D.M.; Williams, D.E.; Tushinski, R.; Gimpe, S.; Eisenman, J.; Cannizzaro, I.
Cell Growth Differ. 2, 373-378, 1991
A:Title: Alternate splicing of mRNAs encoding human mast cell growth factor and localization
A:Reference number: A61190; MUID:92172791; PMID:1724381
A:Accession: B61190
A:Status: nucleic acid sequence not shown; not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-245 <AND>
A:CROSS-references: UNIPROT:P21583; UNIPARC:UPI000002B351
C:Comment: Alternative splicing produces this short form in which a predicted cleavage s
C:Genetics:
A:Gene: GDB:M6F
A:CROSS-references: GDB:128026; OMIM:184745
A:Map position: 12q22-12q22
C:Superfamily: mouse mast cell growth factor
C:Keywords: alternative splicing; glycoprotein; transmembrane protein
F:1-2/Domain: signal sequence #status predicted <SIG>
F:187-209/Domain: transmembrane #status predicted <TMN>
F:90,97,118,145/Binding site: carbohydrate (Aan) (covalent) #status predicted

Query Match 88.1%; Score 1231; DB 2; Length 245;
Best Local Similarity 89.4%; Pred. No. 1.5e-88;
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWILTCTIYQLQLLFPNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYYVPG 60
DB 1 MKKTQTWILTCTIYQLQLLFPNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYYVPG 60

QY 61 MDVLPSCWISSEMVMVQVLSLTDLLDKFNSISSEGLSNYSIIIDKLVINIYDDLVCEVKENSS 120
DB 61 MDVLPSCWISSEMVMVQVLSLTDLLDKFNSISSEGLSNYSIIIDKLVINIYDDLVCEVKENSS 120

QY 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 180
DB 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 180

QY 181 KPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240
DB 181 KPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240

QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 212
DB 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 212

QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 245

RESULT 3
I46575
c-kit ligand - pig
C:Species: Sus scrofa domestica (domestic pig)
C>Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 09-Jul-2004
C:Accession: I46575
R:Zhang, Z.; Anthony, R.V.
Biol. Reprod. 50, 95-102, 1994
A:Title: Porcine stem cell factor/c-kit ligand: its molecular cloning and localization
A:Reference number: I46575; MUID:94146218; PMID:7508758
A:Accession: I46575
```

```
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-274 <ZHA>
A:CROSS-references: UNIPROT:Q29030; UNIPARC:UPI0000135640; GB:L07786; NID:9164420; PIDN:
C:Superfamily: mouse mast cell growth factor
```

```
Query Match 86.1%; Score 1203.5; DB 2; Length 274;
Best Local Similarity 85.8%; Pred. No. 2.4e-86;
Matches 235; Conservative 22; Mismatches 16; Indels 1; Gaps 1;
```

```
QY 1 MKKTQTWILTCTIYQLQLLFPNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYYVPG 60
DB 1 MKKTQTWILTCTIYQLQLLFPNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYYVPG 60

QY 61 MDVLPSCWISSEMVMVQVLSLTDLLDKFNSISSEGLSNYSIIIDKLVINIYDDLVCEVKENSS 120
DB 61 MDVLPSCWISSEMVMVQVLSLTDLLDKFNSISSEGLSNYSIIIDKLVINIYDDLVCEVKENSS 120

QY 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 179
DB 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 180

QY 180 TKPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 239
DB 180 TKPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240

QY 240 RQPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273
DB 240 RQPSLTRAVENTQINEEDNEISMLOEKEREFOEV 274

RESULT 4
S47571
stem cell factor, longer isoform - bovine
C:Species: Bos primigenius taurus (cattle)
C>Date: 27-Jan-1995 #sequence_revision 27-Jan-1995 #text_change 09-Jul-2004
C:Accession: S47571
R:Zhou, J.H.; Hikono, H.; Ohtaki, M.; Kubota, T.; Sakurai, M.
Biochim. Biophys. Acta 1223, 148-150, 1994
A:Title: Cloning and characterization of cDNAs encoding two normal isoforms of bovine st
A:Reference number: S47571; MUID:94339176; PMID:7520283
A:Accession: S47571
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-274 <ZHO>
A:CROSS-references: UNIPROT:Q28132; UNIPARC:UPI0000135639; EMBL:D28934; NID:9538520; PID
C:Superfamily: mouse mast cell growth factor
```

```
Query Match 84.8%; Score 1184.5; DB 2; Length 274;
Best Local Similarity 84.7%; Pred. No. 7.1e-85;
Matches 232; Conservative 20; Mismatches 21; Indels 1; Gaps 1;

QY 1 MKKTQTWILTCTIYQLQLLFPNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYYVPG 60
DB 1 MKKTQTWILTCTIYQLQLLFPNPLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYYVPG 60

QY 61 MDVLPSCWISSEMVMVQVLSLTDLLDKFNSISSEGLSNYSIIIDKLVINIYDDLVCEVKENSS 120
DB 61 MDVLPSCWISSEMVMVQVLSLTDLLDKFNSISSEGLSNYSIIIDKLVINIYDDLVCEVKENSS 120

QY 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 179
DB 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 180

QY 180 TKPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 239
DB 180 TKPFMLPPVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240

QY 240 RQPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273
DB 240 RQPSLTRAVENTQINEEDNEISMLOEKEREFOEV 274
```

## RESULT 5

146929  
stem cell factor - dog  
C:Species: Canis lupus familiaris (dog)  
C:Date: 04-Sep-1997 #sequence\_revision 04-Sep-1997 #text\_change 09-Jul-2004  
C:Accession: I46929  
R:Shull, R.M.; Suggs, S.V.; Langley, K.E.; Okino, K.H.; Jacobsen, F.W.; Martin, F.H.  
Exp. Hematol. 20, 1118-1124, 1992  
A:Title: Canine stem cell factor (c-kit ligand) supports the survival of hematopoietic B  
A:Reference number: I46929; MUID:93106145; PMID:1281786  
A:Accession: I46929  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-274 <SHU>  
A:Cross-references: UNIPROT:Q06220; UNIPARC:UPI000013563A; GB:S53329; NID:G262240; PIDN:  
C:Superfamily: mouse mast cell growth factor

Query Match 84.5%; Score 1180.5; DB 2; Length 274;  
Best Local Similarity 85.4%; Pred. No. 1.5e-84;  
Matches 234; Conservative 17; Mismatches 22; Indels 1; Gaps 1;  
Qy 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
Qy 61 MDVLPSCWISVMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIYDVLVECVKENS 120  
Db 61 MDVLPSCWISVMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIYDVLVECVKENS 120  
Qy 121 KDLKSPKSPRLFTPEEPFRINRSIDAKDPF-VVASETSDCVVSTLSPEKDSRVSV 179  
Db 121 ENVKAPKSPRLFTPEEPFRINRSIDAKDPFETASKSECVVSTLSPEKDSRVSV 180  
Qy 180 TKPFLPPVAASSLRNDSSSNRKAQPPGSSSLHWAAMALPALFSLIIGAFGALYWK 239  
Db 181 TKPFLPPVAASSLRNDSSSNRKAQPPGSSSLHWAAMALPALFSLIIGAFGALYWK 240  
Qy 240 RQPSLTRAVENIQINEEDNEISMLQEKERFQEV 273  
Db 241 KQPNLTRVNIQINEEDNEISMLQEKERFQEV 274

## RESULT 6

S65801  
mast cell growth factor - mouse  
N:Alternate names: hematopoietic growth factor KL; ligand steel factor; stem cell factor  
C:Species: Mus musculus (house mouse)  
C:Date: 28-Oct-1996 #sequence\_revision 27-Feb-1997 #text\_change 09-Jul-2004  
C:Accession: S65801; A43751; A35976; A35972; A35975; A35973; I48768  
R:Bedell, M.A.; Copeland, N.G.; Jenkins, N.A.  
Genetics 142, 927-934, 1996  
A:Title: Multiple pathways for Steel regulation suggested by genomic and sequence analysis  
A:Reference number: S65801; MUID:97002551; PMID:8849898  
A:Accession: S65801  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-273 <BED>  
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI0000028C9B; EMBL:U44725; NID:g1172215; PID:  
R:Huang, E.J.; Nocka, K.H.; Buck, J.; Besmer, P.  
Mol. Biol. Cell 3, 349-362, 1992  
A:Title: Differential expression and processing of two cell associated forms of the kit-  
A:Reference number: A43751; MUID:92330001; PMID:1378327  
A:Accession: A43751  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-214, 'L', 216-273 <HUA>  
A:Cross-references: UNIPARC:UPI000014D0C1; GB:S40364; NID:g251668; PIDN:AAB22554.2; PID:  
A:Note: the authors translated the codon TTG for residue 215 as TTP  
R:Huang, E.; Nocka, K.; Beier, D.R.; Chu, T.Y.; Buck, J.; Lahm, H.W.; Wellner, D.; Leder  
Cell 63, 225-233, 1990  
A:Title: The hematopoietic growth factor KL is encoded by the Sl locus and is the ligand  
A:Reference number: A35976; MUID:91004221; PMID:1698557  
A:Accession: A35976

A:Status: preliminary; not compared with conceptual translation

A:Molecule type: mRNA  
A:Residues: 1-206, 'S', 208-270 <HU2>  
A:Cross-references: UNIPARC:UPI000017955D; GB:M38511  
R:Anderson, D.M.; Lyman, S.D.; Baird, A.; Wignall, J.M.; Bisenman, J.; Rauch, C.; March,  
Cell 63, 235-243, 1990  
A:Title: Molecular cloning of mast cell growth factor, a hematopoietin that is active in  
A:Reference number: A35977; MUID:91004223; PMID:1698558  
A:Accession: A35977  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-273 <AND>  
A:Cross-references: UNIPARC:UPI0000028C9B; GB:M57647; GB:M38436; NID:g199151; PIDN:AAA3-  
R:Copeland, N.G.; Gilbert, D.J.; Cho, B.C.; Donovan, P.J.; Jenkins, N.A.; Coeman, D.; A  
Cell 63, 175-183, 1990  
A:Title: Mast cell growth factor maps near the steel locus on mouse chromosome 10 and i  
A:Reference number: A35972; MUID:91004216; PMID:1698554  
A:Accession: A35972  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 26-53 <COP>  
A:Cross-references: UNIPARC:UPI000017955E; GB:M59912  
R:Zsabo, K.M.; Williams, D.A.; Geissler, E.N.; Broudy, V.C.; Martin, F.H.; Atkins, H.L.,  
Cell 63, 213-224, 1990  
A:Title: Stem cell factor is encoded at the Sl locus of the mouse and is the ligand for  
A:Reference number: A35975; MUID:91004220; PMID:1698556  
A:Accession: A35975  
A:Molecule type: mRNA  
A:Residues: 1-201 <ZSE>  
A:Cross-references: UNIPARC:UPI000016D02D; GB:M59915; NID:g200935; PIDN:AAA40095.1; PID:  
R:Zsabo, K.M.; Wypych, J.; McNiece, I.K.; Lu, H.S.; Smith, K.A.; Karkare, S.B.; Sachdev,  
Cell 63, 195-201, 1990  
A:Title: Identification, purification, and biological characterization of hematopoietic  
A:Reference number: A35973; MUID:91004218; PMID:2208278  
A:Accession: A35973  
A:Status: preliminary  
A:Molecule type: protein  
A:Residues: 27-29, 'R', 31-39 <ZS2>  
A:Cross-references: UNIPARC:UPI000017955F  
R:Brannan, C.I.; Bedell, M.A.; Resnick, J.L.; Eppig, J.J.; Handel, M.A.; Williams, D.E.,  
Genes Dev. 6, 1832-1842, 1992  
A:Title: Developmental abnormalities in Steel17H mice result from a splicing defect in t  
A:Reference number: A44071; MUID:93012940; PMID:1383087  
A:Accession: I48768  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-206, 'S', 208-273 <RES>  
A:Cross-references: UNIPARC:UPI000016CA07; EMBL:X68989; NID:g395283; PIDN:CAA48778.1; PI  
C:Genetics:  
A:Gene: SLF  
A:Map position: 10  
A:Superfamily: mouse mast cell growth factor  
C:Keywords: extracellular protein; glycoprotein; transmembrane protein

Query Match 82.8%; Score 1157; DB 2; Length 273;  
Best Local Similarity 82.8%; Pred. No. 9.8e-83;  
Matches 226; Conservative 19; Mismatches 28; Indels 0; Gaps 0;  
Qy 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
Qy 61 MDVLPSCWISVMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIYDVLVECVKENS 120  
Db 61 MDVLPSCWISVMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIYDVLVECVKENS 120  
Qy 121 KDLKSPKSPRLFTPEEPFRINRSIDAKDPFVWASETSDCVVSTLSPEKDSRVSV 180  
Db 121 KNIKESPKRPTFTPEEPFRINRSIDAKDPFVWASETSDCVVSTLSPEKDSRVSV 180  
Qy 181 KPFMLPPVAASSLRNDSSSNRKAQPPGSSSLHWAAMALPALFSLIIGAFGALYWK 240





## RESULT 10

JN0637  
stem cell factor precursor - chicken  
C:Species: Gallus gallus (chicken)  
C:Date: 24-Feb-1994 #sequence\_revision 24-Feb-1994 #text\_change 09-Jul-2004  
C:Accession: JN0637  
R:Zhou, J.H.; Ohtaki, M.; Sakurai, M.  
Gene 127, 269-270, 1993  
A:Title: Sequence of a cDNA encoding chicken stem cell factor.  
A:Reference number: JN0637; MUID:93273244; PMID:7684722  
A:Accession: JN0637  
A:Molecule type: mRNA  
A:Residues: 1-287 <ZHO>  
A:Cross-references: UNIPROT:Q09108; UNIPARC:UPI000013563C; GB:D13516; NID:G391648; PIDN:  
A:Experimental source: brain  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-287/Product: stem cell factor #status predicted <MAT>  
F:226-248/Domain: transmembrane #status predicted <TM>

Query Match 50.3%; Score 703; DB 2; Length 287;  
Best Local Similarity 51.9%; Pred. No. 2.3e-47;  
Matches 149; Conservative 50; Mismatches 74; Indels 14; Gaps 6;

Qy 1 MKKTQTWLTCTIYQLQLLNLPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
Db 1 MKKAQTWITTCFCLQLLLNLPLVKAQSCGNPVTDDVNDIAKLVGNLPNDYLTILKYVPK 60  
Qy 61 MDVLPSCWISWMVQVLSLTDLLDKFNI---SSEGLSNYSIIDKLVNIVDDLVECVKE 117  
Db 61 MDSLPHNCWHLWVPEFGRSLHNLQKFDVSDSVLSNYSIINNLTIRIINDLMACIAP 120  
Qy 118 NSSKD-LKSKPKSPPEPRLFTPEEPRIENRSDAFKDFVASSETSDCVVSTL-SPEKDS 175  
Db 121 DKNKDFIKENHLYEEDRFIPENFRNRIENRSDAFKDFVASSETSDCVVSTL-SPEKDS 180  
Qy 176 RVSVTKPFMLPPVAASSLRND-----SSSNRKAKNPPGDSLSLHWAAMALPALFSLIIG 229  
Db 181 RVAVTKTISFPFVAASSLRNDISGNTSSNKEALGFISSSSLQGISIALTSLLSLIG 240  
Qy 230 FAFGALYKKQRP-SLTRAVENTIQIN--EEDNEISMLOEKEREFOEV 273  
Db 241 FILGAIYWKTHPKSRPESNETTQCHGCQENEISMLQOKEKEHLQV 287

## RESULT 11

JN0637  
stem cell factor long form precursor - quail  
C:Species: Coturnix coturnix (quail)  
C:Date: 06-Dec-1996 #sequence\_revision 25-Apr-1997 #text\_change 21-Jul-2000  
C:Accession: S70366  
R:Petitte, J.N.; Kulik, M.J.  
Biochim. Biophys. Acta 1307, 149-151, 1996  
A:Title: Cloning and characterization of cDNAs encoding two forms of avian stem cell fac  
A:Reference number: S70366; MUID:96283808; PMID:8679698  
A:Accession: S70366  
A:Molecule type: mRNA  
A:Residues: 1-287 <PET>  
A:Cross-references: UNIPARC:UPI000013563D; EMBL:U43078; NID:g1150875; PIDN:AAC59933.1; F  
A:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-287/Product: stem cell factor long form #status predicted <MAT>  
F:226-250/Domain: transmembrane #status predicted <TM>

Query Match 50.3%; Score 702; DB 2; Length 287;  
Best Local Similarity 51.6%; Pred. No. 2.8e-47;  
Matches 148; Conservative 51; Mismatches 74; Indels 14; Gaps 6;

Qy 1 MKKTQTWLTCTIYQLQLLNLPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
Db 1 MKKAQTWITTCFCLQLLLNLPLVKTQSSCGNPVTDDVNDIAKLVGNLPNDYLTILKYVPK 60

Qy 61 MDVLPSCWISWMVQVLSLTDLLDKF---SNTSEGLSNYSIIDKLVNIVDDLVECVKE 117  
Db 61 MDSLPHNCWHLWVPEFGRSLHNLQKFDVSDSVLSNYSIINNLTIRIINDLMACIAP 120  
Qy 118 NSSKD-LKSKPKSPPEPRLFTPEEPRIENRSDAFKDFVASSETSDCVVSTL-SPEKDS 175  
Db 121 DKNKDFIKENHLYEEDRFIPENFRNRIENRSDAFKDFVASSETSDCVVSTL-SPEKDS 180  
Qy 176 RVSVTKPFMLPPVAASSLRND-----SSSNRKAKNPPGDSLSLHWAAMALPALFSLIIG 229  
Db 181 RVAVTKTISFPFVAASSLRNDISGNTSSNKEALGFISSSSLQGISIALTSLLSLIG 240  
Qy 230 FAFGALYKKQRP-SLTRAVENTIQIN--EEDNEISMLOEKEREFOEV 273  
Db 241 FILGAIYWKTHPKSRPESNETTQCHGCQENEISMLQOKEKEHLQV 287

## RESULT 12

S70367  
stem cell factor short form precursor - quail  
C:Species: Coturnix coturnix (quail)  
C:Date: 06-Dec-1996 #sequence\_revision 25-Apr-1997 #text\_change 21-Jul-2000  
C:Accession: S70367  
R:Petitte, J.N.; Kulik, M.J.  
Biochim. Biophys. Acta 1307, 149-151, 1996  
A:Title: Cloning and characterization of cDNAs encoding two forms of avian stem cell fa  
A:Reference number: S70366; MUID:96283808; PMID:8679698  
A:Accession: S70367  
A:Molecule type: mRNA  
A:Residues: 1-253 <PET>  
A:Cross-references: UNIPARC:UPI000002B34F; EMBL:U43079; NID:g1150877; PIDN:AAC59934.1; F  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-253/Product: stem cell factor short form #status predicted <MAT>  
F:192-216/Domain: transmembrane #status predicted <TM>

Query Match 42.2%; Score 589; DB 2; Length 253;  
Best Local Similarity 45.2%; Pred. No. 1.5e-38;  
Matches 127; Conservative 48; Mismatches 70; Indels 36; Gaps 6;

Qy 1 MKKTQTWLTCTIYQLQLLNLPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60  
Db 1 MKKAQTWITTCFCLQLLLNLPLVKTQSSCGNPVTDDVNDIAKLVGNLPNDYLTILKYVPK 60  
Qy 61 MDVLPSCWISWMVQVLSLTDLLDKF---SNTSEGLSNYSIIDKLVNIVDDLVECVKE 117  
Db 61 MDSLPHNCWHLWVPEFGRSLHNLQKFDVSDSVLSNYSIINNLTIRIINDLMACIAP 120  
Qy 118 NSSKD-LKSKPKSPPEPRLFTPEEPRIENRSDAFKDFVASSETSDCVVSTL-SPEKDS 175  
Db 121 DKNKDFIKENHLYEEDRFIPENFRNRIENRSDAFKDFVASSETSDCVVSTL-SPEKDS 177  
Qy 176 RVSVTKPFMLPPVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGAL 235  
Db 178 -----NEEALGFISSSSLQGISIALTSLLSLIGFILGVI 212

Qy 236 YWKKRQP-SLTRAVENTIQIN--EEDNEISMLOEKEREFOEV 273  
Db 213 YWKKTHPKSRPESNETTQCHGCQENEISMLQOKEKEHLQV 253

## RESULT 13

S29052  
stem cell factor - human (fragments)  
C:Species: Homo sapiens (man)  
C:Date: 22-Nov-1993 #sequence\_revision 10-Nov-1995 #text\_change 09-Jul-2004  
C:Accession: S29052  
R:Lu, H.S.; Clogston, C.L.; Wypych, J.; Parker, V.P.; Lee, T.D.; Swiderek, K.; Balceraj  
; Langley, K.E.  
Arch. Biochem. Biophys. 298, 150-158, 1992  
A:Title: Post-translational processing of membrane-associated recombinant human stem cel

A:Reference number: S29052; MUID:92398336; PMID:1381905

A:Accession: S29052

A>Status: preliminary

A:Molecule type: protein

A:Residues: 1-13;14-30;31-46;47-59;60-86;87-95;96-107;108-124 <LUH>

A:Cross-references: UNIPROT:Q7M4N8; UNIPARC:UPI0000179563; UNIPARC:UPI0000179564; UNIPAR

IPARC:UPI0000179564

C:Superfamily: mouse mast cell growth factor

Query Match 41.3%; Score 576.5; DB 2; Length 124;

Best Local Similarity 75.2%; Pred. No. 5.4e-38;

Matches 124; Conservative 0; Mismatches 0; Indels 41; Gaps 4;

Qy 26 EGICRNVTVNNVKDVTKLAVANLPKDYMITLKVYVPGMDVLPSCHCWISWVOLSLSLTDLL 85

Db 1 EGICRNVTVNNVK-----DVLPSHCWISWVOLS----- 30

Qy 86 DKFSNISEGLSNYSIIIDKLVNIVDLVECVKENSCKLKKSKSPKPEPRLFTPEEFPFRIFN 145

Db 31 DKFSNISEGLSNYSII-----DDLVECVKENSCKLKKSKSPKPEPRLFTPEEFPFRIFN 83

Qy 146 RSIDAFKDFVVASSTDCVSVSSTLSPEKDSRVSVTKPFMLPPVAA 190

Db 84 RSI----DFVVASSTDCVSVSSTLSPEKDSRVSVTKPFMLPPVAA 124

#### RESULT 14

B35971

mast cell growth factor - mouse (fragment)

C:Species: Mus musculus (house mouse)

C>Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004

C:Accession: B35971

R:Williams, D.B.; Eisenman, J.; Baird, A.; Rauch, C.; Van Ness, K.; March, C.J.; Park, I

Cell 63, 167-174, 1990

A:Title: Identification of a ligand for the c-kit proto-oncogene.

A:Reference number: A35971; MUID:91004215; PMID:1698553

A:Accession: B35971

A>Status: preliminary

A:Molecule type: protein

A:Residues: 1-51 <WIL>

A:Cross-references: UNIPROT:P20826; UNIPARC:UPI00000179562

C:Superfamily: mouse mast cell growth factor

C:Keywords: transmembrane protein

Query Match 12.6%; Score 175.5; DB 2; Length 51;

Best Local Similarity 72.3%; Pred. No. 2.7e-07;

Matches 34; Conservative 5; Mismatches 7; Indels 1; Gaps 1;

Qy 28 ICRNRVTNNVKDVTKLAVANLPKDYMITLKVYVPGMDVLPSCHCWISWV 74

Db 3 ICGNPVTDNVKDIITKLAVANLPNDYMITLNYVAGMDVLP--WWLDDMI 48

#### RESULT 15

A35971

mast cell growth factor - mouse (fragment)

C:Species: Mus musculus (house mouse)

C>Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004

C:Accession: A35971

R:Williams, D.B.; Eisenman, J.; Baird, A.; Rauch, C.; Van Ness, K.; March, C.J.; Park, I

Cell 63, 167-174, 1990

A:Title: Identification of a ligand for the c-kit proto-oncogene.

A:Reference number: A35971; MUID:91004215; PMID:1698553

A:Accession: A35971

A>Status: preliminary

A:Molecule type: protein

A:Residues: 1-49 <WIL>

A:Cross-references: UNIPROT:P20826; UNIPARC:UPI00000179561

C:Superfamily: mouse mast cell growth factor

C:Keywords: transmembrane protein

Query Match 12.3%; Score 172.5; DB 2; Length 49;

Best Local Similarity 73.5%; Pred. No. 4.4e-07;

Matches 36; Conservative 4; Mismatches 6; Indels 3; Gaps 2;

Qy 28 ICRNRVTNNVKDVTKLAVANLPKDYMITLKVYVPGMDVLPSCHCWISWV 76

Db 3 ICGNPVTDNVKDIITKLAVANLPNDYMITLNYVAGMDVLP--WY-DMVIQ 48

Search completed: February 22, 2006, 18:20:27

Job time : 23.562 secs

GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:05:51 ; Search time 140.636 Seconds  
(without alignments)  
1369.555 Million cell updates/sec

Title: US-10-620-642-61

Perfect score: 1397

Sequence: 1 MKKTQTWILCIYQLLFFN.....NEEDNBIISMLQEKREPEQEV 273

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

1: uniprot\_sprot.\*

2: uniprot\_trembl.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1397	100.0	273	1 SCF HUMAN	P21583 homo sapien
2	1224	87.6	245	2 Q86524 9PRIM	Q86524 papio cynoc
3	1219.5	87.3	274	1 SCF HORSE	Q95md2 equus cabal
4	1217.5	87.2	274	1 SCF FELCA	P79169 felis silve
5	1203.5	86.1	274	1 SCF FIG	Q29030 sus scrofa
6	1187.5	85.0	274	1 SCF CAPHI	Q95ml9 capra hircu
7	1184.5	84.8	274	1 SCF BOVIN	Q28132 bos taurus
8	1180.5	84.5	274	1 SCF CANFA	Q06220 canis fami
9	1180.5	84.5	274	1 SCF MUSVI	Q95nl8 mustela vis
10	1171	83.8	238	2 Q68D22 HUMAN	Q68d22 homo sapien
11	1158	82.9	273	1 SCF RAT	P21581 rattus norv
12	1157	82.8	273	1 SCF MOUSE	P20826 mus musculu
13	1156.5	82.8	267	1 SCF SHEEP	P79368 ovis aries
14	992	71.0	245	2 Q54A14 RAT	Q54a14 rattus norv
15	865	61.9	208	2 Q64384 9MURI	Q64384 mus sp. c-k
16	865	61.9	208	2 Q78ED8 MOUSE	Q78ed8 mus musculu
17	835	59.8	164	2 Q86419 9MACMU	Q86419 macaca mula
18	703	50.3	287	1 SCF CHICK	Q09108 gallus gall
19	702	50.3	287	1 SCF COTJA	Q09314 coturnix co
20	576.5	41.3	124	2 Q7M4N8 HUMAN	Q7m4n8 homo sapien
21	509	36.4	123	2 Q61854 MOUSE	Q61854 mus musculu
22	480	34.4	160	2 Q8C9K1 MOUSE	Q8c9k1 mus musculu
23	375	26.8	271	2 Q3YGP2 9MBME	Q3ygp2 ambystoma m
24	343	24.6	270	2 Q7ZXV0 XENLA	Q7zxv0 xenopus lae
25	309	21.6	270	2 Q8AYN7 XENLA	Q8ayn7 xenopus lae
26	299	21.4	270	2 Q6DTW3 XENLA	Q6dtw3 xenopus lae
27	207.5	14.9	272	2 Q56JH6 BRARE	Q56jh6 brachydanio
28	154.5	11.1	234	2 Q8S1A5 9TETNG	Q8s1a5 tetradon n
29	145	10.4	36	2 Q8SPM7 CANFA	Q8spm7 canis fami
30	130	9.3	267	2 Q56JH5 BRARE	Q56jh5 brachydanio
31	127	9.1	1697	2 Q81FM4 PLAF7	Q81fm4 plasmodium

32	127	9.1	1711	2	Q8MWP2 PLAF7	Q8mwp2 plasmodium
33	127	9.1	1713	2	Q8MWP1 PLAF7	Q8mwp1 plasmodium
34	127	9.1	1716	2	Q8MWH2 PLAF7	Q8mwh2 plasmodium
35	114.5	8.2	330	2	Q4Z4Q3 PLAF7	Q4z4q3 plasmodium
36	110	7.9	555	2	Q7REM0 PLAF7	Q7rem0 plasmodium
37	109	7.8	1011	2	Q6FLY9 CANGA	Q6fly9 candida gla
38	108.5	7.8	373	2	Q75F78 ASHGO	Q75f78 ashbya goss
39	107.5	7.7	989	1	PTP3 DICDI	P54637 dictyosteli
40	107.5	7.7	990	2	Q54SY3 DICDI	Q54sy3 dictyosteli
41	106.5	7.6	1231	2	Q7RQB9 PLAF7	Q7rqe9 plasmodium
42	106.5	7.6	1665	2	Q6YA77 PLARE	Q6yax7 plasmodium
43	106.5	7.6	5542	2	Q7YXX2 CRYPV	Q7yxx2 cryptospori
44	106	7.6	465	2	Q97H56 CLOAB	Q97h56 clostridium
45	105.5	7.6	1498	2	Q96VK6 EMENI	Q96vk6 emericeila

#### ALIGNMENTS

RESULT 1  
ID SCF HUMAN STANDARD; PRT; 273 AA.  
AC P21583; Q16487; Q9UQK7;  
DT 01-MAY-1991 (Rel. 18, Created)  
DT 01-MAY-1991 (Rel. 18, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast cell growth factor) (MGF).  
DE Name=KITLG; Synonym=MGF, SCF;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.  
OC NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
RX MEDLINE=91004219; PubMed=2208279; DOI=10.1016/0092-8674(90)90301-T; Martin F.H., Suggs S.V., Langley K.E., Lu H.S., Ting J., Okino K.H., Morris C.F., McNiece I.K., Jacobsen P.W., Mendiaz E.A., Birkett N.C., Smith K.A., Johnson M.J., Parker V.P., Flores J.C., Patel A.C., Fisher E.F., Erjavec H.O., Herrera C.J., Wypych J., Sachdev R.K., Pope J.A., Leslie I., Wen D., Lin C.-H., Cupples R.L., Szabo K.M.; "Primary structure and functional expression of rat and human stem cell factor DNAs.";  
RT Cell 63:203-211(1990).  
RN [2]  
RP NUCLEOTIDE SEQUENCE (ISOFORM 2).  
RX PubMed=1724381; Anderson D.M., Williams D.E., Tushinski R., Gimpel S., Eisenman J., Cannizzaro L.A., Aronson M., Croce C.M., Huebner K., Cosman D.; "Alternate splicing of mRNAs encoding human mast cell growth factor and localization of the gene to chromosome 12q22-q24.";  
RL Cell Growth Differ. 2:373-378(1991).  
RN [3]  
RP NUCLEOTIDE SEQUENCE (ISOFORM 2).  
RX MEDLINE=99160429; PubMed=10049787; DOI=10.1006/bbrc.1999.02650; Blair H.C., Julian B.A., Cao X., Jordan S.E., Dong S.S.; "Parathyroid hormone-regulated production of stem cell factor in human osteoblasts and osteoblast-like cells.";  
RT Biochem. Biophys. Res. Commun. 255:778-784(1999).  
RN [4]  
RP NUCLEOTIDE SEQUENCE.  
RX Han C., Peng X., Yuan J., Qiang B.; Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.  
RN [5]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Colling P.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,



Query Match 87.6%; Score 1224; DB 2; Length 245;  
 Best Local Similarity 88.6%; Pred. No. 2.4e-85;  
 Matches 242; Conservative 1; Mismatches 2; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLLFPNLTKEGICRRVTVNNVNDKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFPNLTKEGICRRVTVNNVNDKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKSNISSEGLSNYSIIDKLVNIIVDDIVECVKENS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDFKSNISSEGLSNYSIIDKLVNIIVDDIVECVKENS 120

QY 121 KDLKSKFSPKSPRLFTPEEPRIENRSDAPKDFVVASETSDCVSVSTLSPKDSRVSV 180  
 DB 121 KDLKSKFSPKSPRLFTPEEPRIENRSDAPKDFVVASETSDCVSVSTLSPKDSRVSV 174

QY 181 KPFMLPPVAASSLRNDSSSNRKAQNPQDSSLHWAAMALPALPSLIIGFAGALYWK 240  
 DB 175 -----KAKNPPGDSLSLHWAAMALPAFFSLIIGFAGALYWK 212

QY 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFQEV 273  
 DB 213 QPSLTRAVENTIQINEEDNEISMLOEKEREFQEV 245

RESULT 3

SCF\_HORSE STANDARD; PRT: 274 AA.  
 AC Q95MD2; O62765; Q95MG7; Q95MG8; Q9N1Y5;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast cell growth factor) (MGF)  
 DE Name=KITLG; Synonyms=MGF, SCF;  
 OS Equus caballus (Horse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.  
 OX NCBI\_TaxID=9796;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE OF 4-264.  
 RA Terry R.R., Mickelson J.R., Schmutz S., Cothran E.G., Bailey E.;  
 RT "Equus caballus mast cell growth factor (MGF).";  
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE OF 12-267.  
 RA Tissue=Skin;  
 RC Rieder S., Checa-Cortes M.L., Joerg H., Stranzinger G.;  
 RT "An equine sequence homologous to stem cell factor (KIT-ligand).";  
 RL Submitted (MAR-1998) to the EMBL/GenBank/DBJ databases.  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE OF 107-202 AND 227-274.  
 RA Terry R.R., Bailey E.F., Cothran E.G.;  
 RT "Evaluation of MGF as the candidate gene for Appaloosa spotting.";  
 RL Submitted (APR-2001) to the EMBL/GenBank/DBJ databases.  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE OF 147-197.  
 RA Caetano A.R., Shue Y.-L., Lyons L.A., Laughlin T.F., O'Brien S.J.,  
 RA Murray J.D., Bowling A.T.;  
 RT "A Primary Human-Horse comparative gene map.";  
 RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to augment the proliferation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. Mediates also cell-cell adhesion. Acts synergistically with other cytokines, probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a secreted soluble form (By similarity).  
 CC -!- PTM: A soluble form is produced by proteolytic processing of the extracellular domain (By similarity).  
 CC -!- SIMILARITY: Belongs to the SCF family.

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DR EMBL; AF401625; AAK94474.1; -; mRNA.  
 DR EMBL; AF053498; AAC97076.1; -; mRNA.  
 DR EMBL; AF367704; AAK63249.1; -; Genomic DNA.  
 DR EMBL; AF367706; AAK63250.1; -; Genomic DNA.  
 DR EMBL; AF130770; AAF36716.1; -; Genomic DNA.  
 DR SMR; Q95MD2; 29-161.  
 DR InterPro; IPR012351; Cytokine\_4\_hlx.  
 DR InterPro; IPR003452; SCF.  
 DR PANTHER; PTHR11574; SCF; 1.  
 DR Pfam; PF02404; SCF; 1.  
 KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
 FT SIGNAL 1 25  
 FT CHAIN 26 274  
 FT TOPO\_DOM 26 215  
 FT TRANSMEM 216 238  
 FT TOPO\_DOM 239 274  
 FT CARBOHYD 90 90  
 FT CARBOHYD 97 97  
 FT CARBOHYD 145 145  
 FT CARBOHYD 196 196  
 FT CARBOHYD 207 207  
 FT DISULFID 29 114  
 FT DISULFID 68 164  
 FT CONFLICT 15 15  
 FT CONFLICT 241 241  
 FT CONFLICT 241 241  
 SQ SEQUENCE 274 AA; 31217 MW; 96C1D4C9059132F2 CRC64;

Query Match 87.3%; Score 1219.5; DB 1; Length 274;  
 Best Local Similarity 87.2%; Pred. No. 6.2e-85;  
 Matches 239; Conservative 19; Mismatches 15; Indels 1; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLLFPNLTKEGICRRVTVNNVNDKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFPNLTKEGICRRVTVNNVNDKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKSNISSEGLSNYSIIDKLVNIIVDDIVECVKENS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDFKSNISSEGLSNYSIIDKLVNIIVDDIVECVKENS 120

QY 121 KDLKSKFSPKSPRLFTPEEPRIENRSDAPKDFVVASETSDCVSVSTLSPKDSRVSV 179  
 DB 121 ENVKSKYKQESRLFTPEEPRIENRSDAPKDFVVASETSDCVSVSTLSPKDSRVSV 180

QY 180 TKPFLPPVAASSLRNDSSSNRKAQNPQDSSLHWAAMALPALPSLIIGFAGALYWK 239  
 DB 181 TKPFLPPVAASSLRNDSSSNRKAQNPQDSSLHWAAMALPALPSLIIGFAGALYWK 240

QY 240 QPSLTRAVENTIQINEEDNEISMLOEKEREFQEV 273  
 DB 241 KQPNLTRAVENTIQINEEDNEISMLOEKEREFQEV 274

RESULT 4  
 SCF\_FELCA  
 ID - SCF\_FELCA STANDARD; PRT: 274 AA.  
 AC P79169;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast cell growth factor) (MGF).  
 DE Name=KITLG; Synonyms=SCF;  
 OS Felis silvestris catus (Cat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Carnivora; Flesipedata; Felidae; Felinae; Felis.



Matches 235; Conservative 22; Mismatches 16; Indels 1; Gaps 1;  
 QY 1 MKKQTWTILTCIYLQLLFNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKQTWTILTCIYLQLLFNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIVDDLVCEKNS 120  
 Db 61 MDVLPSCWISWVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIVDDLVCEKNS 120  
 QY 121 KDKKSPKSPRLFTPEPFPRFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 179  
 Db 121 ENVKSSKSPRLFTPEPFPRFNRSIDAFKDFLEWAPKSECVISSTLPEKDSRVSV 180  
 QY 180 TKPMLPPVAASSLRNDSSSSNRKAKPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 239  
 Db 181 TKPMLPPVAASSLRNDSSSSNRKAKPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
 QY 240 RQPSLTRAVENTIQTNEEDNEISMLQEKEREFQEV 273  
 Db 241 KQPNLTRVENVQINEEDNEISMLQEKEREFQEV 274

RESULT 6

SCF\_CAPHI  
 ID - SCF\_CAPHI STANDARD; PRT; 274 AA.  
 AC Q95M19;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast  
 DE cell growth factor) (MGF).  
 GN Name=KITLG; Synonyms=SCF;  
 OS Capra hircus (Goat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
 OC Pecora; Bovidae; Caprinae; Capra.  
 OX NCBI\_TaxID=9925;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=Shiba; TISSUE=Brain;  
 RA Yanagisawa N., Tanaka S., Yamanouchi K., Tojo H., Tachi C.;  
 RT "Identification of splicing isoforms of caprine stem cell factor  
 RT (GSCF) transcripts and expression patterns of the two major isoforms,  
 RT GSCF825 and GSCF741, in the brain and the skin of adult and fetal  
 RT Shiba goats, Capra hircus.";  
 RL Submitted (MAR-1997) to the EMBL/GenBank/DBJ databases.  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
 CC augment the proliferation of both myeloid and lymphoid  
 CC hematopoietic progenitors in bone marrow culture. Mediates also  
 CC cell-cell adhesion. Acts synergistically with other cytokines,  
 CC probably interleukins (by similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a  
 CC secreted soluble form (by similarity).  
 CC -!- PTM: A soluble form is produced by proteolytic processing of the  
 CC extracellular domain (by similarity).  
 CC -!- SIMILARITY: Belongs to the SCF family.

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 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC -----  
 DR EMBL; AB002152; BAB1753.1; -; mRNA.  
 DR SMR; Q95M19; 29-161.  
 DR InterPro; IPR012351; Cytokine\_4\_hlx.  
 DR InterPro; IPR003452; SCF.  
 DR PANTHER; PTHR11574; SCF; 1.  
 DR Pfam; PF02404; SCF; 1.  
 KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
 FT SIGNAL 1 25

FT CHAIN 26 274 Kit ligand.  
 FT TOPO DOM 26 215 Extracellular (Potential).  
 FT TRANSMEM 216 238 Potential.  
 FT TOPO DOM 239 274 Cytoplasmic (Potential).  
 FT CARBOHYD 90 90 N-linked (GlcNAc...) (Potential).  
 FT CARBOHYD 97 97 N-linked (GlcNAc...) (Potential).  
 FT CARBOHYD 145 145 N-linked (GlcNAc...) (Potential).  
 FT CARBOHYD 196 196 N-linked (GlcNAc...) (Potential).  
 FT DISULFID 29 114 By similarity.  
 FT DISULFID 68 164 By similarity.  
 SQ SEQUENCE 274 AA; 31053 MW; BBPE669A509BF65D CRC64;

Query Match 85.0%; Score 1187.5; DB 1; Length 274;  
 Best Local Similarity 85.0%; Pred. NO. 1.7e-82;  
 Matches 233; Conservative 20; Mismatches 20; Indels 1; Gaps 1;

QY 1 MKKQTWTILTCIYLQLLFNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYVPG 60  
 Db 1 MKKQTWTILTCIYLQLLFNPLVKTGICRNRTNNVDVTKLVANLPKDYMITLKYVPG 60  
 QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIVDDLVCEKNS 120  
 Db 61 MDVLPSCWISWVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIVDDLVCEKNS 120  
 QY 121 KDKKSPKSPRLFTPEPFPRFNRSIDAFKDF-VVASETSDCVVSTLSPEKDSRVSV 179  
 Db 121 ENVKSSKSPRLFTPEPFPRFNRSIDAFKDFLEWAPKSECVISSTLPEKDSRVSV 180  
 QY 180 TKPMLPPVAASSLRNDSSSSNRKAKPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 239  
 Db 181 TKPMLPPVAASSLRNDSSSSNRKAKPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
 QY 240 RQPSLTRAVENTIQTNEEDNEISMLQEKEREFQEV 273  
 Db 241 KQPNLTRVENVQINEEDNEISMLQEKEREFQEV 274

RESULT 7

SCF\_BOVIN  
 ID - SCF\_BOVIN STANDARD; PRT; 274 AA.  
 AC Q28I32; OSTU74;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast  
 DE cell growth factor) (MGF).  
 GN Name=KITLG; Synonyms=SCF;  
 OS Bos taurus (Bovine).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
 OC Pecora; Bovidae; Bovinae; Bos.  
 OX NCBI\_TaxID=9913;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
 RC TISSUE=Splicein;  
 RX MEDLINE=94333176; PubMed=7520283; DOI=10.1016/0167-4889(94)90084-1;  
 RA Zhou J., Hikono H., Ohtaki M., Kubota T., Sakurai M.;  
 RT "Cloning and characterization of cDNAs encoding two normal isoforms of  
 RT bovine stem cell factor.";  
 RL Biochim. Biophys. Acta 1223:148-150(1994).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RC TISSUE=Fetal brain;  
 RA Kudo T.;  
 RL Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE OF 204-239, AND VARIANT ASP-218.  
 RC STRAIN=Belgian Blue;  
 RX MEDLINE=9315331; PubMed=10384045; DOI=10.1007/s003359901076;  
 RA Seitz J.J., Schmutz S.M., Thue T.D., Buchanan F.C.;  
 RT "A missense mutation in the bovine MGF gene is associated with the  
 RT roan phenotype in Belgian Blue and Shorthorn cattle.";









Query Match 82.9%; Score 1158; DB 1; Length 273;  
 Best Local Similarity 82.4%; Pred. No. 3.1e-80;  
 Matches 225; Conservative 18; Mismatches 30; Indels 0; Gaps 0;

QY 1 MKKTTMTTCYLYQLLNFNPLVKTGICRNVNKKVDTKLVANLPKDYMTITLYVPG 60  
 DB 1 MKKTTMTTCYLYQLLNFNPLVKTGICRNVNKKVDTKLVANLPKDYMTITLYVAG 60  
 QY 61 MDVLPFCHWISVMVQLSDSLDLDKFNISSEGLSNYSIIIDKLVNVDVLEVCVKENS 120  
 DB 61 MDVLPFCHWLRDWMVTHLSVSLTLLDKFNSISEGLSNYSIIIDKLVNVDVLEVCVKENS 120  
 QY 121 KDLKXFKSPRLPTPEFFRIFNRSIDAFKDFVVASSTSCVSVSTLSPKDSRVST 180  
 DB 121 KVVESLKKPRTNPTPEFFRIFNRSIDAFKDFVVASSTSCVSVSTLSPKDSRVST 180  
 QY 181 KPMLPPVVAASLRNDSSSNRKNPPGDSLSLHWAAMALPALFSLITGPACALYWK 240  
 DB 181 KPMLPPVVAASLRNDSSSNRKAAPGDPGLQWTAMALPALISLVITGFAFGALYWK 240  
 QY 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273  
 DB 241 QSSLTRAVENTIQUINEDNEISMLOKEREFOEV 273

# RESULT 12

SCF\_MOUSE STANDARD; PRT: 273 AA.  
 AC P20526; P97332; Q62524; Q64222; Q921N5;  
 DT 01-FEB-1991 (Rel. 17, Created)  
 DT 01-MAY-1991 (Rel. 18, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast cell growth factor) (MGF) (Hematopoietic growth factor KL) (Steel factor).  
 DE Name=Kitlg; Synonyms=Kitl, Mgf, Sl, Slf;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Muridae; Murinae; Mus.  
 OX NCBI\_TaxId=10090;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RC STRAIN=WC86F1;  
 RX MEDLINE=91004223; PubMed=1698558; DOI=10.1016/0092-8674(90)90304-W;  
 RA Anderson D.M., Lyman S.D., Baird A., Wignall J.M., Eisenman J.,  
 RA Rauch C., March C.J., Boswell H.S., Gimpei S.D., Cosman D.,  
 RA Williams D.E.;  
 RT "Molecular cloning of mast cell growth factor, a hematopoietin that is active in both membrane bound and soluble forms.";  
 RL Cell 63:235-243(1990).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
 RX MEDLINE=92330001; PubMed=1378327;  
 RA Huang E.J., Nocka K.H., Buck J., Besmer P.;  
 RT "Differential expression and processing of two cell associated forms of the kit-ligand, KL-1 and KL-2.";  
 RL Mol. Biol. Cell 3:349-362(1992).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
 RC STRAIN=WC86F1;  
 RX MEDLINE=91160046; PubMed=1705866; DOI=10.1016/0092-8674(91)90326-T;  
 RA Planagan J.G., Chan D.C., Leder P.;  
 RT "Transmembrane form of the kit ligand growth factor is determined by alternative splicing and is missing in the Sld mutant.";  
 RL Cell 64:1025-1035(1991).  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RX MEDLINE=93012940; PubMed=1383087;  
 RA Brannan C.I., Bedell M.A., Resnick J.L., Eppig J.J., Handel M.A.,  
 RA Williams D.E., Lyman S.D., Donovan P.J., Jenkins N.A., Copeland N.G.;  
 RT "Developmental abnormalities in Steel17H mice result from a splicing

defect in the steel factor cytoplasmic tail.";  
 RN Genes Dev. 6:1832-1842(1992).  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RC STRAIN=C57BL/6J;  
 RX MEDLINE=97002551; PubMed=8849898;  
 RA Bedell M.A., Copeland N.G., Jenkins N.A.;  
 RT "Multiple pathways for steel regulation suggested by genomic and sequence analysis of the murine Steel gene.";  
 RL Genetics 142:927-934(1996).  
 RN [6]  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1), AND VARIANTS PRO-193 AND SER-207.  
 RC STRAIN=C3H/He; TISSUE=Brain;  
 RX MEDLINE=97032534; PubMed=8875893; DOI=10.1007/s00359900247;  
 RA Graw J., Loester J., Neuhauser-Klaus A., Pretsch W., Schmitt-John T.;  
 RT "Molecular analysis of two new Steel mutations in mice shows a transversion or an insertion.";  
 RL Mamm. Genome 7:843-846(1996).  
 RN [7]  
 RP NUCLEOTIDE SEQUENCE (ISOFORM 1), AND VARIANTS SER-122; PRO-193 AND SER-207.  
 RC STRAIN=102/E1 x C3H/He;  
 RX MEDLINE=98025115; PubMed=9360640; DOI=10.1016/S1383-5726(97)00005-8;  
 RA Graw J., Neuhauser-Klaus A., Pretsch W.;  
 RT "Detection of a point mutation (A to G) in exon 5 of the murine Mgf gene defines a novel allele at the Steel locus with a weak phenotype.";  
 RL Mutat. Res. 382:75-78(1997).  
 RN [8]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
 RC STRAIN=C57BL/6J; TISSUE=Cerebellum;  
 RX MEDLINE=22354683; PubMed=1246851; DOI=10.1038/nature01266;  
 RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,  
 RA Nikaide I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,  
 RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T.,  
 RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,  
 RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,  
 RA Dalla E., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,  
 RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,  
 RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,  
 RA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,  
 RA Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,  
 RA Maglott D.R., Maltais L., Marchionni L., McKenzie L., Miki H.,  
 RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,  
 RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,  
 RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,  
 RA Sadelin A., Schneider C., Sempile C.A., Setou M., Shimada K.,  
 RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,  
 RA Verardo R., Wagner L., Wahlestedt C., Wang Y., Watanabe Y., Wells C.,  
 RA Wilming L.G., Wyszynski-Boris A., Yanagisawa M., Yang I., Yang L.,  
 RA Yuan Y., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,  
 RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,  
 RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,  
 RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,  
 RA Miyazaki A., Sakai K., Sasaki D., Shibata K., Shinagawa A.,  
 RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,  
 RA Birney E., Hayashizaki Y.;  
 RT "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";  
 RL Nature 420:563-573(2002).  
 RN [9]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1), AND VARIANT SER-207.  
 RX MEDLINE=2238257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins P.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Shat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh P.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton C., Soares M.B., Bonaldo A.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Udén T.B., Toshiyuki S., Carninci P., Prange C.,  
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Sanchez A.,  
RA Faney J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,  
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,  
RA Butlerfield Y.S.N., Krzyzinski M.I., Skalska U., Smalilus D.E.,  
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,  
RT "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences";  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RN [10]  
RP NUCLEOTIDE SEQUENCE OF 1-270 (ISOFORM 1), AND PROTEIN SEQUENCE OF  
RP 26-65.  
RX MEDLINE=91004221; PubMed=1698557; DOI=10.1016/0092-8674(90)90303-V;  
RA Huang B., Nocka K., Beier D.R., Chu T.Y., Buck J., Lahm H.W.,  
RA Wellner D., Leder P., Besmer P.;  
RT "The hematopoietic growth factor KL is encoded by the SL locus and is  
RT the ligand of the c-kit receptor, the gene product of the W locus";  
RL Cell 63:225-233(1990).  
RN [11]  
RP NUCLEOTIDE SEQUENCE OF 1-201.  
RX MEDLINE=91004220; PubMed=1698556; DOI=10.1016/0092-8674(90)90302-U;  
RA Zeebo K.M., Williams D.A., Geisler E.N., Broudy V.C., Martin F.H.,  
RA Atkins H.L., Hsu R.Y., Birkett N.C., Okino K.H., Murodock D.C.,  
RA Jacobsen F.W., Langley K.E., Smith K.A., Takeishi T., Cattanech B.M.,  
RA Galli S.J., Suggs S.V.;  
RT "Stem cell factor is encoded at the SL locus of the mouse and is the  
RT ligand for the c-kit tyrosine kinase receptor";  
RL Cell 63:213-224(1990).  
RN [12]  
RP PROTEIN SEQUENCE OF 26-53.  
RX MEDLINE=91004216; PubMed=1698554; DOI=10.1016/0092-8674(90)90298-S;  
RA Copeland N.G., Gilbert D.J., Cho B.C., Donovan P.J., Jenkins N.A.,  
RA Cosman D., Anderson D., Lyman S.D., Williams D.E.;  
RT "Mast cell growth factor maps near the steel locus on mouse chromosome  
RT 10 and is deleted in a number of steel alleles";  
RL Cell 63:175-183(1990).  
RN [13]  
RP PARTIAL PROTEIN SEQUENCE OF 26-78.  
RX MEDLINE=91004215; PubMed=1698553; DOI=10.1016/0092-8674(90)90297-R;  
RA Williams D.E., Eisenman J., Baird A., Rauch C., van Ness K.,  
RA March C.J., Park L.S., Martin U., Mochizuki D.Y., Boswell H.S.,  
RA Burgess G.S., Cosman D., Lyman S.D.;  
RT "Identification of a ligand for the c-kit proto-oncogene";  
RL Cell 63:167-174(1990).  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediates also  
CC cell-cell adhesion. Acts synergistically with other cytokines,  
CC probably interleukins.  
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).  
CC Also exists as a secreted soluble form (isoform 1 only) (By  
CC similarity).  
CC -!- ALTERNATIVE PRODUCTS:  
CC Event=Alternative splicing; Named isoforms=2;  
CC Name=1; Synonyms=KL-1;  
CC IsoId=P20826-1; Sequence=Displayed;  
CC Name=2; Synonyms=KL-2;  
CC IsoId=P20826-2; Sequence=VSP\_006023;  
CC -!- DEVELOPMENTAL STAGE: Acts in the early stages of hematopoiesis.  
CC -!- PTM: A soluble form is produced by proteolytic processing of  
CC isoform 1 in the extracellular domain.  
CC -!- SIMILARITY: Belongs to the SCF family.  
CC -----  
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
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CC use as long as its content is in no way modified and this statement is not  
CC removed.  
CC -----

DR EMBL; M59915; AAA40095.1; -; mRNA.  
DR EMBL; M57647; AAA39538.1; -; mRNA.  
DR EMBL; S40534; AAB22555.2; -; mRNA.  
DR EMBL; X68989; CAA48778.1; -; mRNA.  
DR EMBL; U44724; -; NOT ANNOTATED CDS; Genomic\_DNA.  
DR EMBL; U44725; AAC52447.1; -; mRNA.  
DR EMBL; X95381; CAA64667.1; -; mRNA.  
DR EMBL; X99322; CAA67698.1; -; mRNA.  
DR EMBL; Y10287; CAA71329.1; -; mRNA.  
  
Query Match 82.8%; Score 1157; DB 1; Length 273;  
Best Local Similarity 82.8%; Pred. No. 3.7e-80;  
Matches 226; Conservative 19; Mismatches 28; Indels 0; Gaps 0;  
  
QY 1 MKKTQTWLTCTCYLQLLLFNPLVKTGTCNRVNTNNVKDVKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWLTCTCYLQLLLFNPLVKTGTCGNPTDNTNVKIDITKLVANLPNDYMITLNYVAG 60  
  
QY 61 MDVLPSCWISWMVQVLSLTLDDKFSNISSEGLSNYSIIDKLVNIYDDLVCEVKENSS 120  
DB 61 MDVLPSCWLRDMVQLSLTLTLDDKFSNISSEGLSNYSIIDKLVNIYDDLVCEVKENAP 120  
  
QY 121 KDLKSKFKSPKPEPLFTPEEPFRIFNRSIDAPKDFVVASETSDCVSVSTLSPEKDSRVSVT 180  
DB 121 KNIKESPKRPETRGFTPEEPFISFNRSIDAPKDFVVASETSDCVSVSTLSPEKDSRVSVT 180  
  
QY 181 KPFMLPPVAASSLRNDSSSNRKAQNPQDSSLHWAMALPALFSLIIGFAGALYWKKR 240  
DB 181 KPFMLPPVAASSLRNDSSSNRKAQNPQDSSLHWAMALPALFSLIIGFAGALYWKKR 240  
  
QY 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273  
DB 241 QSSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273  
  
RESULT 13  
SCF\_SHEEP  
ID SCF\_SHEEP STANDARD; PRT; 267 AA.  
AC P79368; Q28591;  
DT 28-FEB-2003 (Rel. 41, Created)  
DT 28-FEB-2003 (Rel. 41, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Kit ligand precursor (c-kit ligand) (Stem cell factor) (SCF) (Mast  
DE cell growth factor) (MGF) (Fragment).  
GN Name=KITLG; Synonyms=SCF;  
OS Ovis aries (Sheep).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
OC Pecora; Bovidae; Caprinae; Ovis.  
OX NCBI\_TaxID=9940;  
RN [1]  
RP NUCLEOTIDE SEQUENCE OF 8-267.  
RX TISSUE=Ovarian follicle;  
RC MEDLINE=96413880; PubMed=8662240; DOI=10.1007/s003359900142;  
RA Tisdall D.J., Quirk L.D., Galloway S.M.;  
RT "Ovine stem cell factor gene is located within a syntenic group on  
RT chromosome 3 conserved across mammalian species";  
RL Mamm. Genome 7:472-473(1996).  
RN [2]  
RP NUCLEOTIDE SEQUENCE OF 1-202.  
RX MEDLINE=99263397; PubMed=10328863; DOI=10.1006/cyto.1998.0430;  
RA McInnes C.J., Deane D., Thomson J., Broad A., Haig D.M.;  
RT "The cloning and expression of the cDNA for ovine stem cell factor  
RT (kit-ligand) and characterization of its in vitro haematopoietic  
RT activity";  
RL Cytokine 11:249-256(1999).  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediates also  
CC cell-cell adhesion. Acts synergistically with other cytokines,  
CC probably interleukins (By similarity).  
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a

```

CC      secreted soluble form (By similarity).
CC      -!- PTM: A soluble form is produced by proteolytic processing of the
CC      extracellular domain (By similarity).
CC      -!- SIMILARITY: Belongs to the SCF family.
CC      -----
CC      This Swiss-Prot entry is copyright. It is produced through a collaboration
CC      between the Swiss Institute of Bioinformatics and the EMBL outstation
CC      the European Bioinformatics Institute. There are no restrictions on its
CC      use as long as its content is in no way modified and this statement is not
CC      removed.
CC      -----
CC      EMBL; U89874; AAB49491.1; -; mRNA.
CC      EMBL; Z50743; CAA90620.1; -; mRNA.
CC      FIR; S58313; S58313.
CC      SMR; P79368; 29-161.
CC      InterPro; IPR012351; Cytokine_4_hlx.
CC      InterPro; IPR003452; SCF.
CC      PANTHER; PTHR11574; SCF; 1.
CC      Pfam; PF02404; SCF; 1.
CC      Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
CC      SIGNAL 1 25
CC      CHAIN 26 >267
CC      TOPO_DOM 26 215
CC      TRANSMEM 216 238
CC      TOPO_DOM 239 >267
CC      CARBOHYD 90 90
CC      CARBOHYD 97 97
CC      CARBOHYD 145 145
CC      CARBOHYD 196 196
CC      DISULFID 29 114
CC      DISULFID 68 164
CC      NON_TER 267
CC      SEQUENCE 267 AA; 30149 MW; 9D9D959E4B9EC841 CRC64;

Query Match      82.8%; Score 1156.5; DB 1; Length 267;
Best Local Similarity 85.0%; Pred. No. 3.9e-80;
Matches 227; Conservative 19; Mismatches 20; Indels 1; Gaps 1;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVKTKLVANLPKDYMITLKYVPG 60
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTDDVDKTKLVANLPKDYMITLKYVPG 60

Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDFKPSNISEGLSNYSIIDKLVNIIVDDLVCECKENSS 120
Db 61 MDVLPSCWISSEMVVQLSVSLTDLDFKPSNISEGLSNYSIIDKLVNIIVDDLVCECKENSS 120

Qy 121 KDLKSKSPKSPRLPTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSV 179
Db 121 ENVKSKSPKSPRLPTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSV 180

Qy 180 TKPFMLPPVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 239
Db 181 TKPFMLPPVAASSLRNDSSSNRKASNIENISLQWAAVALPAPFSLVIGFAFGALYWK 240

Qy 240 QPSLTRAVENTIQINEEDNEISMLQEK 266
Db 241 KQPNLTRVTENKQINEEDNEISMLQEK 267

RESULT 14
Q54A14 RAT PRELIMINARY; PRT; 245 AA.
AC Q54A14.
DT 13-SEP-2005 (TrEMBLrel. 31, Created)
DT 13-SEP-2005 (TrEMBLrel. 31, Last sequence update)
DT 13-SEP-2005 (TrEMBLrel. 31, Last annotation update)
DE Stem cell factor KL-2.
GN Name=scf;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;

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RN NUCLEOTIDE SEQUENCE.
RP STRAIN=Sprague Dawley; TISSUE=Embryonic kidney;
RX MEDLINE=22831116; PubMed=12951073; DOI=10.1016/j.bbrc.2003.08.025;
RA Hirokawa Y.S., Watanabe M., Shiraiishi T.;
RT "The 3'UTR of stem cell factor suppresses protein expression from a
RT cotransfected vector.";
RL Biochem. Biophys. Res. Commun. 309:469-474 (2003).
DR EMBL; AB105879; BAC84980.1; -; mRNA.
SQ SEQUENCE 245 AA; 27681 MW; 9615130876AC9D52 CRC64;

Query Match      71.0%; Score 992; DB 2; Length 245;
Best Local Similarity 71.8%; Pred. No. 1.3e-67;
Matches 196; Conservative 18; Mismatches 31; Indels 28; Gaps 1;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVKTKLVANLPKDYMITLKYVPG 60
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNPVTNDVDKTKLVANLPKDYMITLKYVAG 60

Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDFKPSNISEGLSNYSIIDKLVNIIVDDLVCECKENSS 120
Db 61 MDVLPSCWLRDMVTHLSVSLTDLDFKPSNISEGLSNYSIIDKLVNIIVDDLVACMEENAP 120

Qy 121 KDLKSKSPKSPRLPTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSV 180
Db 121 KNVKESLKKPRTNFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKKG----- 174

Qy 181 KPFMLPPVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240
Db 175 -----KAAKSPEDPGLQWTNALPALISLVIGFAFGALYWK 212

Qy 241 QPSLTRAVENTIQINEEDNEISMLQEKREFQEV 273
Db 213 QSSLTRAVENTIQINEEDNEISMLQEKREFQEV 245

RESULT 15
Q64384 SMURI PRELIMINARY; PRT; 208 AA.
AC Q64384.
DT 01-NOV-1996 (TrEMBLrel. 01, Created)
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE C-kit ligand C-terminally truncated secreted form KL-sld.
GN Name=Kitl;
OS Mus sp.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Mus.
OX NCBI_TaxID=10095;
RN NUCLEOTIDE SEQUENCE.
RP MEDLINE=923330001; PubMed=1378327;
RA Huang E.J., Nocka K.H., Buck J., Besmer P.;
RT "Differential expression and processing of two cell associated forms
RT of the kit-ligand: KL-1 and KL-2.";
RL Mol. Biol. Cell 3:349-362(1992).
DR EMBL; S40536; AAB22556.2; -; mRNA.
DR HSP; P21583; 18CF.
DR SMR; Q64384; 29-159.
DR MGI; MGI:96974; Kitl.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005173; P:stem cell factor receptor binding; IEA.
DR GO; GO:0007155; P:cell adhesion; IEA.
DR InterPro; IPR003452; SCF.
DR Pfam; PF02404; SCF; 1.
SQ SEQUENCE 208 AA; 23222 MW; C74DD63956EB817 CRC64;

Query Match      61.9%; Score 865; DB 2; Length 208;
Best Local Similarity 82.8%; Pred. No. 5.2e-58;
Matches 169; Conservative 16; Mismatches 19; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVKTKLVANLPKDYMITLKYVPG 60

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Db 1 MKKTQTWIIITCIIYQLLLFNPLVTKKEICGNPVTENVKDITKLVANLEPNFYMITLNYVAG 60  
Qy 61 MDVLPSCWISBMVVQLSDSLTDLLDKFSNISSEGLSNYSIIDKLVNIYVDDLVECVKENS 120  
Db 61 MDVLPSCWLRDMVQLSLSTLLDKFSNISSEGLSNYSIIDKLGKIVDDLVLCEENAP 120  
Qy 121 KOLKSFKSPERLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
Db 121 KNIKESPKRPETRSFTPEEFTSIFNRSIDAFKDFMVASDTSDCVLSSTLGPEKDSRVSVT 180  
Qy 181 KPFLPPVAASSLRNDSSSNRKA 204  
Db 181 KPFLPPVAASSLRNDSSSNRKA 204

Search completed: February 22, 2006, 18:19:21  
Job time : 141.636 secs

GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:19:42 ; Search time 33.0909 Seconds  
(without alignments)  
682.074 Million cell updates/sec

Title: US-10-620-642-61

Perfect score: 1397

Sequence: 1 MKKTQTWLTCTIYQLLLFN.....NEEDNEISMLQEKERFQEV 273

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA.\*

- 1: /cgn2\_6/ptodata/1/1aa/5 COMB.pdp.\*
- 2: /cgn2\_6/ptodata/1/1aa/6 COMB.pdp.\*
- 3: /cgn2\_6/ptodata/1/1aa/H COMB.pdp.\*
- 4: /cgn2\_6/ptodata/1/1aa/pCTUS COMB.pdp.\*
- 5: /cgn2\_6/ptodata/1/1aa/RE COMB.pdp.\*
- 6: /cgn2\_6/ptodata/1/1aa/backfiles1.pdp.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1397	100.0	273	1	US-08-220-379B-2
2	1397	100.0	273	1	US-08-628-428-9
3	1397	100.0	273	2	US-08-482-918-49
4	1397	100.0	273	2	US-08-482-918-61
5	1397	100.0	273	2	US-09-224-681-49
6	1397	100.0	273	2	US-09-224-681-61
7	1397	100.0	273	2	US-08-336-728A-48
8	1397	100.0	273	2	US-08-336-728A-49
9	1397	100.0	273	2	US-08-336-728A-61
10	1397	100.0	273	2	US-09-635-251-49
11	1397	100.0	273	2	US-09-635-251-61
12	1397	100.0	273	2	US-09-224-683-49
13	1397	100.0	273	2	US-09-224-683-61
14	1397	100.0	273	2	US-09-604-325A-49
15	1397	100.0	273	2	US-09-604-325A-61
16	1397	100.0	290	2	US-09-949-016-9393
17	1397	100.0	290	2	US-09-949-016-9394
18	1392	98.6	273	2	US-08-482-918-48
19	1392	99.6	273	2	US-09-224-681-48
20	1392	99.6	273	2	US-09-635-251-48
21	1392	99.6	273	2	US-09-224-683-48
22	1392	99.6	273	2	US-09-604-325A-48
23	1381	98.9	273	2	US-08-482-918-50
24	1381	98.9	273	2	US-09-224-681-50
25	1381	98.9	273	2	US-09-635-251-50
26	1381	98.9	273	2	US-09-224-683-50
27	1381	98.9	273	2	US-09-604-325A-50

28	1378	98.6	273	2	US-08-336-728A-50
29	1265	90.6	248	1	US-08-955-848A-82
30	1232.5	88.2	266	2	US-08-482-918-57
31	1232.5	88.2	266	2	US-09-224-681-57
32	1232.5	88.2	266	2	US-08-336-728A-57
33	1232.5	88.2	266	2	US-09-635-251-57
34	1232.5	88.2	266	2	US-09-224-683-57
35	1232.5	88.2	266	2	US-09-604-325A-57
36	1231	88.1	245	2	US-08-482-918-63
37	1231	88.1	245	2	US-09-224-681-63
38	1231	88.1	245	2	US-08-336-728A-63
39	1231	88.1	245	2	US-09-635-251-63
40	1231	88.1	245	2	US-09-224-683-63
41	1231	88.1	245	2	US-09-604-325A-63
42	1231	88.1	262	2	US-09-949-016-9391
43	1231	88.1	262	2	US-09-949-016-9392
44	1202.5	86.1	274	2	US-08-336-728A-52
45	1200.5	85.9	274	2	US-09-485-639D-2

#### ALIGNMENTS

RESULT 1  
US-08-220-379B-2  
; Sequence 2, Application US/08220379B  
; Patent No. 5525708  
; GENERAL INFORMATION:  
; APPLICANT: No. 5525708ka, Karl  
; APPLICANT: Lobell, Robert B  
; TITLE OF INVENTION: STABILIZED DIMER OF KIT LIGAND  
; NUMBER OF SEQUENCES: 7  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Fish & Neave  
; STREET: 1251 Avenue of the Americas  
; CITY: New York  
; STATE: New York  
; COUNTRY: United States of America  
; ZIP: 10020  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/220,379B  
; FILING DATE: 28-MAR-1994  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Haley Jr, James F  
; REGISTRATION NUMBER: 27,794  
; REFERENCE/DOCKET NUMBER: CytoMed/2  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 212-596-9000  
; TELEFAX: 212-596-9090  
; INFORMATION FOR SEQ ID NO: 2:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: cleavage site  
; LOCATION: 164..165  
US-08-220-379B-2

Query Match 100.0%; Score 1397; DB 1; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYQLLLFNPLVKTEGICRRVTVNNVKDVKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNPLVKTEGICRRVTVNNVKDVKLVANLPKDYMITLKYPG 60

QY 61 MDVLPSCWISVMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECKENSS 120  
DB 61 MDVLPSCWISVMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECKENSS 120  
QY 121 KOLKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KOLKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKKR 240  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKKR 240  
QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273  
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

## RESULT 2

US-08-628-428-9  
; Sequence 9, Application US/08628428  
; Patent No. 5885962  
; GENERAL INFORMATION:  
; APPLICANT: Lu, Hsieng  
; TITLE OF INVENTION: SCF ANALOG COMPOSITIONS AND METHODS  
; NUMBER OF SEQUENCES: 9  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Amgen Inc.  
; STREET: 1840 DeHavilland Drive  
; CITY: Thousand Oaks  
; STATE: CA  
; COUNTRY: USA  
; ZIP: 91320-1789  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/628,428  
; FILING DATE: 05-APR-1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Knight, Matthew W  
; REGISTRATION NUMBER: 36,846  
; REFERENCE/DOCKET NUMBER: A-400  
; INFORMATION FOR SEQ ID NO: 9:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..273  
; OTHER INFORMATION: /note= "NOTE: Mature full length  
; OTHER INFORMATION: 1-248 SCF protein begins at amino acid 26; amino acid 1-25  
; OTHER INFORMATION: include Met and leader sequences for membrane band form of hu  
; OTHER INFORMATION: recombinant SCF."

US-08-628-428-9  
Query Match 100.0%; Score 1397; DB 1; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60  
QY 61 MDVLPSCWISVMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECKENSS 120  
DB 61 MDVLPSCWISVMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECKENSS 120

QY 121 KOLKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KOLKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKKR 240  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKKR 240  
QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273  
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

## RESULT 3

US-08-482-918-49  
; Sequence 49, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zaebo, Krisztina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-08-482-918-49

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60  
QY 61 MDVLPSCWISVMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECKENSS 120  
DB 61 MDVLPSCWISVMVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNIIVDDLVECKENSS 120  
QY 121 KOLKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KOLKSFKSPERLFTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180



QY 181 KPFLPVPVAAASLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
DB 181 KPFLPVPVAAASLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
QY 241 QPSLTRAVENTIOINEEDNEISMLOKEREFOEV 273  
DB 241 QPSLTRAVENTIOINEEDNEISMLOKEREFOEV 273  
RESULT 4  
US-08-482-918-61  
; Sequence 61, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 61:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-482-918-61  
Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTLYQLLLFNPVLKTEGICRNVNKKDVTKLVANLPKDYMTILKYVPG 60  
DB 1 MKKTQTWLTCTLYQLLLFNPVLKTEGICRNVNKKDVTKLVANLPKDYMTILKYVPG 60  
QY 61 MDVLPFHCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVCEKNS 120  
DB 61 MDVLPFHCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVCEKNS 120  
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DB 121 KDLKSKFSPRLTPTPEFFRIFNRSIDAFKDFVVASSETDCVVSSTLSPKDSRVSVT 180  
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DB 181 KPFLPVPVAAASLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240

QY 241 QPSLTRAVENTIOINEEDNEISMLOKEREFOEV 273  
DB 241 QPSLTRAVENTIOINEEDNEISMLOKEREFOEV 273  
RESULT 5  
US-09-224-681-49  
; Sequence 49, Application US/09224681  
; Patent No. 6207454  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene  
; TITLE OF INVENTION: Transfer with Stem Cell Factor (SCF) Polypeptide  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,681  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35199  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX:  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-224-681-49

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 MKKTQTWLTCTIYQLQLLNFPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWLTCTIYQLQLLNFPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
  
QY 61 MDVLPSCWISWMMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWMMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIIVDDLVECVKENS 120  
  
QY 121 KDLKSKFSPERLFTPEEPFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSPERLFTPEEPFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240  
  
QY 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273  
DB 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273

RESULT 6  
US-09-224-681-61  
; Sequence 61, Application US/09224681  
; Patent No. 6207454  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene  
; TITLE OF INVENTION: Transfer with Stem Cell Factor (SCF) Polypeptide  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,681  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990

PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35199  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX:  
; INFORMATION FOR SEQ ID NO: 61:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-224-681-61  
  
Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 MKKTQTWLTCTIYQLQLLNFPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWLTCTIYQLQLLNFPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
  
QY 61 MDVLPSCWISWMMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWMMVQVLSLTDLLDKFNSISGLSNYSIIDKLVNIIVDDLVECVKENS 120  
  
QY 121 KDLKSKFSPERLFTPEEPFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
DB 121 KDLKSKFSPERLFTPEEPFRIFNRSIDAPKDFVASETSDCVVSSSTLSPEKDSRVSVT 180  
  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240  
  
QY 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273  
DB 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273

RESULT 7  
US-08-336-728A-48  
; Sequence 48, Application US/08336728A  
; Patent No. 6207802  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/336,728A  
; FILING DATE: 09-NOV-1994  
; CLASSIFICATION: 424  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255

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; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/32956
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 48:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-336-728A-48

Query Match 100.0%; Score 1397; DB 2; Length 273;
Best Local Similarity 100.0%; Pred. No. 4.9e-134;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNRTNNVNDVKLVANLPKDYMTLTKVPG 60
Db 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNRTNNVNDVKLVANLPKDYMTLTKVPG 60

QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVECVKENS 120
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKSPKPEPLTPEFFRIFNRSIDAFKDFVVASSETSCVWSSTLSPEKDSRVSVT 180
Db 121 KDLKSKSPKPEPLTPEFFRIFNRSIDAFKDFVVASSETSCVWSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSNSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240
Db 181 KPFMLPPVAASSLRNDSNSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240

QY 241 QPSLTRAVENIQINEEDNEISMLOKEREFOEV 273
Db 241 QPSLTRAVENIQINEEDNEISMLOKEREFOEV 273

RESULT 8
US-08-336-728A-49
; Sequence 49, Application US/08336728A
; Patent No. 6207802
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/336,728A
; FILING DATE: 09-NOV-1994
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/32956
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-336-728A-49

Query Match 100.0%; Score 1397; DB 2; Length 273;
Best Local Similarity 100.0%; Pred. No. 4.9e-134;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNRTNNVNDVKLVANLPKDYMTLTKVPG 60
Db 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNRTNNVNDVKLVANLPKDYMTLTKVPG 60

QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVECVKENS 120
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKSPKPEPLTPEFFRIFNRSIDAFKDFVVASSETSCVWSSTLSPEKDSRVSVT 180
Db 121 KDLKSKSPKPEPLTPEFFRIFNRSIDAFKDFVVASSETSCVWSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSNSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240
Db 181 KPFMLPPVAASSLRNDSNSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGALYWKCR 240

QY 241 QPSLTRAVENIQINEEDNEISMLOKEREFOEV 273
Db 241 QPSLTRAVENIQINEEDNEISMLOKEREFOEV 273

RESULT 9
US-08-336-728A-61
; Sequence 61, Application US/08336728A
; Patent No. 6207802
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.

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APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
FILING DATE: 09-NOV-1994  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32956  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 61:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-336-728A-61

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNVNKKDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNVNKKDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVECVKNESS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVECVKNESS 120

QY 121 KDLKKSFKSPERLFTPEEFFRIFNRSIDAFKDFVVASETSDCVSSTLSPEKDSRVST 180  
DB 121 KDLKKSFKSPERLFTPEEFFRIFNRSIDAFKDFVVASETSDCVSSTLSPEKDSRVST 180

QY 181 KPMLEPVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGLYWKKR 240  
DB 181 KPMLEPVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGLYWKKR 240

QY 241 QPSLITRAVENIQINEEDNEISMLQEKERFQEV 273  
DB 241 QPSLITRAVENIQINEEDNEISMLQEKERFQEV 273

## RESULT 10

US-09-635-251-49  
Sequence 49, Application US/09635251  
Patent No. 6759215  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/635,251  
FILING DATE: 07-AUG-2000  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/449,182  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 04-OCT-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32957A  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 49:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-09-635-251-49

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNVNKKDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWILTCIYQLLLFNPLVKTEGICRNVNKKDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVECVKNESS 120

Db 61 MDVLPSCWISSEMVQLSDSLDLDKFSNI SEGLSNYSIIIDKLVNIVDDLVCEVKENSS 120  
QY 121 KDLKKSFKSPPEPLFTPEEFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
Db 121 KDLKKSFKSPPEPLFTPEEFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
Db 181 KPFMLPPVVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 241 QPSLTRAveniQINEEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAveniQINEEDNEISMLOKEREFOEV 273  
RESULT 11  
US-09-635-251-61  
; Sequence 61, Application US/09635251  
; Patent No. 6759215  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/635,251  
; FILING DATE: 07-Aug-2000  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,182  
; FILING DATE: 24-MAY-1995  
; APPLICATION NUMBER: 08/172,329  
; FILING DATE: 21-DEC-1993  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; APPLICATION NUMBER: 07/684,535  
; FILING DATE: 04-OCT-1991  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; REFERENCE/DOCKET NUMBER: 01017/32957A  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: <Unknown>  
; INFORMATION FOR SEQ ID NO: 61:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear

; MOLECULE TYPE: protein  
; SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-09-635-251-61  
Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0;  
QY 1 MKKTQTWILTCIYQLQLLFNPLVKTGICRNVTVNNKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWILTCIYQLQLLFNPLVKTGICRNVTVNNKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISSEMVQLSDSLDLDKFSNI SEGLSNYSIIIDKLVNIVDDLVCEVKENSS 120  
Db 61 MDVLPSCWISSEMVQLSDSLDLDKFSNI SEGLSNYSIIIDKLVNIVDDLVCEVKENSS 120  
QY 121 KDLKKSFKSPPEPLFTPEEFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
Db 121 KDLKKSFKSPPEPLFTPEEFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
Db 181 KPFMLPPVVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 241 QPSLTRAveniQINEEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAveniQINEEDNEISMLOKEREFOEV 273  
RESULT 12  
US-09-224-683-49  
; Sequence 49, Application US/09224683  
; Patent No. 6841147  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,683  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990

;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35136  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: 25-3856  
;; INFORMATION FOR SEQ ID NO: 49:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; STRANDEDNESS: single  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; US-09-224-683-49

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 1 MKKTQTWLTCTIYQLQLLFPNLPVKTEGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60

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QY 121 KDLKSKFSKPEPRLFTPEEPRFNRSIDAPKDFVVASETSCVVSSTLSPKDSRVSVT 180  
Db 121 KDLKSKFSKPEPRLFTPEEPRFNRSIDAPKDFVVASETSCVVSSTLSPKDSRVSVT 180

QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 240  
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QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFQEV 273  
Db 241 QPSLTRAVENTQINEEDNEISMLOEKEREFQEV 273

RESULT 13  
US-09-224-683-61  
; Sequence 61, Application US/09224683  
; Patent No. 6841147  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Krisztina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,683

;; FILING DATE:  
;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 09/005,893  
;; FILING DATE: 12-JAN-1998  
;; CLASSIFICATION:  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 08/449,653  
;; FILING DATE: 24-MAY-1995  
;; CLASSIFICATION:  
;; APPLICATION NUMBER: 07/982,255  
;; FILING DATE: 25-NOV-1992  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/589,701  
;; FILING DATE: 01-OCT-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/573,616  
;; FILING DATE: 24-AUG-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35136  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: 25-3856  
;; INFORMATION FOR SEQ ID NO: 61:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; US-09-224-683-61

Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFQEV 273  
Db 241 QPSLTRAVENTQINEEDNEISMLOEKEREFQEV 273

RESULT 14  
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; Sequence 49, Application US/09604325A  
; Patent No. 6852313  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Krisztina M.  
; Bosselman, Robert A.

;; Suggs, Sidney V.  
;; Martin, Francis H.  
;; TITLE OF INVENTION: Stem Cell Factor  
;; NUMBER OF SEQUENCES: 104  
;; CORRESPONDENCE ADDRESS:  
;; ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun  
;; STREET: 6300 Sears Tower, 233 South Wacker Drive  
;; CITY: Chicago  
;; STATE: Illinois  
;; COUNTRY: United States of America  
;; ZIP: 60606-6402  
;;  
;; COMPUTER READABLE FORM:  
;; MEDIUM TYPE: Floppy disk  
;; COMPUTER: IBM PC compatible  
;; OPERATING SYSTEM: PC-DOS/MS-DOS  
;; SOFTWARE: Patent in Release #1.0, Version #1.30  
;; CURRENT APPLICATION DATA:  
;; APPLICATION NUMBER: US/09/604,325A  
;; FILING DATE: 17-Jun-2002  
;; CLASSIFICATION: <Unknown>  
;;  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: 07/982,255  
;; FILING DATE: 25-NOV-1992  
;; APPLICATION NUMBER: 07/589,701  
;; FILING DATE: 01-OCT-1990  
;; APPLICATION NUMBER: 07/573,616  
;; FILING DATE: 24-AUG-1990  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;;  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/32953  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: 25-3856  
;;  
;; INFORMATION FOR SEQ ID NO: 49:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; STRANDEDNESS: single  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; SEQUENCE DESCRIPTION: SEQ ID NO: 49:

US-09-604-325A-49  
Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
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QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVKCVKENS 120  
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVKCVKENS 120  
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Db 121 KDLKSKSPKPEPRLTPPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVSVT 180  
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Db 181 KPFMLPPVAASLRNDSSSNRKA NPKGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 241 QPSLTRAVENTIQINEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAVENTIQINEDNEISMLOKEREFOEV 273

RESULT 15  
US-09-604-325A-61  
; Sequence 61, Application US/09604325A  
; Patent No. 6852313  
; GENERAL INFORMATION:  
; APPLICANT: Zaebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
;  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent in Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/604,325A  
; FILING DATE: 17-Jun-2002  
; CLASSIFICATION: <Unknown>  
;  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
;  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/32953  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
;  
; INFORMATION FOR SEQ ID NO: 61:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; SEQUENCE DESCRIPTION: SEQ ID NO: 61:

US-09-604-325A-61  
Query Match 100.0%; Score 1397; DB 2; Length 273;  
Best Local Similarity 100.0%; Pred. No. 4.9e-134;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVKCVKENS 120  
Db 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNI VDDLVKCVKENS 120  
QY 121 KDLKSKSPKPEPRLTPPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVSVT 180  
Db 121 KDLKSKSPKPEPRLTPPEFFRIFNRSIDAFKDFVVASETSCVVSSTLSPEKDSRVSVT 180  
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Db	181	KPFMLPPVAASSLRNDSSSNRKACNPPGDSLSLHWAANALPALFSLIIIGFAFGALYWKCR	240
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Db	241	QPSLTRAVENIQINEEDNEISMLQEKEREFQEV	273

Search completed: February 22, 2006, 18:21:59  
Job time : 34.0909 secs



GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:20:42 ; Search time 109.05 Seconds  
(without alignments)  
1046.014 Million cell updates/sec

Title: US-10-620-642-61

Perfect score: 1397

Sequence: 1 MKYQTWLTCTYLLQLLPN.....NEEDNEISMLQEKERFQEV 273

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA\_Main:

- 1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep.\*
- 2: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep.\*
- 3: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep.\*
- 4: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep.\*
- 5: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep.\*
- 6: /cgn2\_6/ptodata/1/pubpaa/US11\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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2	1397	100.0	273	3	US-09-005-243-61 Sequence 61, Appl
3	1397	100.0	273	3	US-09-224-683-49 Sequence 49, Appl
4	1397	100.0	273	3	US-09-224-683-61 Sequence 61, Appl
5	1397	100.0	273	4	US-10-175-608-49 Sequence 49, Appl
6	1397	100.0	273	4	US-10-175-608-61 Sequence 61, Appl
7	1397	100.0	273	5	US-10-620-642-49 Sequence 49, Appl
8	1397	100.0	273	5	US-10-620-642-61 Sequence 61, Appl
9	1392	99.6	273	3	US-09-005-243-48 Sequence 48, Appl
10	1392	99.6	273	3	US-09-224-683-48 Sequence 48, Appl
11	1392	99.6	273	4	US-10-175-608-48 Sequence 48, Appl
12	1392	99.6	273	5	US-10-620-642-48 Sequence 48, Appl
13	1381	98.9	273	3	US-09-005-243-50 Sequence 50, Appl
14	1381	98.9	273	3	US-09-224-683-50 Sequence 50, Appl
15	1381	98.9	273	4	US-10-175-608-50 Sequence 50, Appl
16	1381	98.9	273	5	US-10-620-642-50 Sequence 50, Appl
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18	1232.5	88.2	266	3	US-09-224-683-57 Sequence 57, Appl
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20	1232.5	88.2	266	5	US-10-620-642-57 Sequence 57, Appl
21	1231	88.1	245	3	US-09-005-243-63 Sequence 63, Appl
22	1231	88.1	245	3	US-09-224-683-63 Sequence 63, Appl
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24	1231	88.1	245	5	US-10-688-845-87 Sequence 87, Appl
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29 1180.5 84.5 274 5 US-10-620-642-51 Sequence 51, Appl  
30 1179.5 84.4 271 3 US-09-005-243-52 Sequence 52, Appl  
31 1179.5 84.4 271 3 US-09-224-683-52 Sequence 52, Appl  
32 1179.5 84.4 271 4 US-10-175-608-52 Sequence 52, Appl  
33 1179.5 84.4 271 5 US-10-620-642-52 Sequence 52, Appl  
34 1173 84.0 273 3 US-09-005-243-53 Sequence 53, Appl  
35 1173 84.0 273 3 US-09-224-683-53 Sequence 53, Appl  
36 1173 84.0 273 5 US-10-175-608-53 Sequence 53, Appl  
37 1173 84.0 273 5 US-10-620-642-53 Sequence 53, Appl  
38 1158 82.9 273 3 US-09-005-243-42 Sequence 42, Appl  
39 1158 82.9 273 3 US-09-224-683-42 Sequence 42, Appl  
40 1158 82.9 273 4 US-10-175-608-42 Sequence 42, Appl  
41 1158 82.9 273 5 US-10-620-642-42 Sequence 42, Appl  
42 1157 82.8 273 3 US-09-005-243-55 Sequence 55, Appl  
43 1157 82.8 273 3 US-09-224-683-55 Sequence 55, Appl  
44 1157 82.8 273 4 US-10-132-345-4 Sequence 4, Appl  
45 1157 82.8 273 4 US-10-175-608-55 Sequence 55, Appl

#### ALIGNMENTS

RESULT 1  
US-09-005-243-49  
; Sequence 49, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465

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; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-005-243-49

Query Match 100.0%; Score 1397; DB 3; Length 273;
Best Local Similarity 100.0%; Pred. No. 8.5e-122;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPVLKTEGICRRNVTNNVKDVKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYLQLLFNPVLKTEGICRRNVTNNVKDVKLVANLPKDYMITLKYPVG 60
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DB 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273

RESULT 2
US-09-005-243-61
; Sequence 61, Application US/09005243
; Patent No. US20020018763A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosseiman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/005,243
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/34465
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-005-243-61

Query Match 100.0%; Score 1397; DB 3; Length 273;
Best Local Similarity 100.0%; Pred. No. 8.5e-122;
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPVLKTEGICRRNVTNNVKDVKLVANLPKDYMITLKYPVG 60
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DB 61 MDVLPSCWCISEMVMVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120
QY 121 KDLKSFKSPPEPLFTPEEPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180
DB 121 KDLKSFKSPPEPLFTPEEPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLHWAAMALPALFSLIIIGFAFGALYWKCR 240
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLHWAAMALPALFSLIIIGFAFGALYWKCR 240
QY 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273
DB 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273

RESULT 3
US-09-224-683-49
; Sequence 49, Application US/09224683
; Patent No. US20020031491A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosseiman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
```

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICANT: Zeebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marehall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/224,683  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35136  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 49:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-224-683-49

Query Match 100.0%; Score 1397; DB 3; Length 273;  
Best Local Similarity 100.0%; Pred. No. 8.5e-122;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYLQLLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKNS 120  
DB 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKNS 120  
QY 121 KDLKSFSPKPEPLTPPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSVT 180  
DB 121 KDLKSFSPKPEPLTPPEFFRIFNRSIDAFKDFVVASSETSCVSVSTLSPKDSRVSVT 180  
QY 181 KPFMLPPVAASLRDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 240  
DB 181 KPFMLPPVAASLRDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 240  
QY 241 QPSLTRAVENTIINEDNEISMLOKEREFEQV 273  
DB 241 QPSLTRAVENTIINEDNEISMLOKEREFEQV 273

RESULT 4  
US-09-224-683-61

Sequence 61, Application US/09224683  
Patent No. US20020031491A1  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSER: Marehall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/224,683  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/005,893  
FILING DATE: 12-JAN-1998  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/449,653  
FILING DATE: 24-MAY-1995  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35136  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 61:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-224-683-61

Query Match 100.0%; Score 1397; DB 3; Length 273;  
Best Local Similarity 100.0%; Pred. No. 8.5e-122;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYLQLLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWVQVLSLTDLLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKNS 120

Db 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDDLVECKENSS 120  
QY 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVT 180  
Db 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSNNKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWKKR 240  
Db 181 KPFMLPPVAASLRNDSSNNKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWKKR 240  
QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273

RESULT 5

US-10-175-608-49  
; Sequence 49, Application US/10175608  
; Publication No. US20040181044A1  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION NUMBER: US/10/175,608  
; FILING DATE: 16-Oct-2002  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/635,249  
; FILING DATE: 07-AUG-2000  
; APPLICATION NUMBER: 09/486,546  
; FILING DATE: 24-MAY-1995  
; APPLICATION NUMBER: 08/172,329  
; FILING DATE: 21-DEC-1993  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; APPLICATION NUMBER: 07/684,535  
; FILING DATE: 10-APR-1991  
; APPLICATION NUMBER: 09/589,701  
; FILING DATE: 10-OCT-1991  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35199  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: <Unknown>  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids

; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-10-175-608-49  
Query Match 100.0%; Score 1397; DB 4; Length 273;  
Best Local Similarity 100.0%; Pred. No. 8.5e-122; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0;  
QY 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRRNRTNNVNDVKLVANLPKDYMITLKYYPG 60  
Db 1 MKKTQTWLTCTIYQLQLLFNPLVKTGICRRNRTNNVNDVKLVANLPKDYMITLKYYPG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDDLVECKENSS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDDKPSNISSEGLSNYSIIDKLVNIIVDDDLVECKENSS 120  
QY 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVT 180  
Db 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSNNKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWKKR 240  
Db 181 KPFMLPPVAASLRNDSSNNKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWKKR 240  
QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273  
Db 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273

RESULT 6

US-10-175-608-61  
; Sequence 61, Application US/10175608  
; Publication No. US20040181044A1  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/175,608  
; FILING DATE: 16-Oct-2002  
; CLASSIFICATION: <Unknown>  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/635,249  
; FILING DATE: 07-AUG-2000  
; APPLICATION NUMBER: 09/486,546  
; FILING DATE: 24-MAY-1995  
; APPLICATION NUMBER: 08/172,329  
; FILING DATE: 21-DEC-1993  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; APPLICATION NUMBER: 07/684,535  
; FILING DATE: 10-APR-1991  
; APPLICATION NUMBER: 09/589,701  
; FILING DATE: 10-OCT-1991  
; APPLICATION NUMBER: 07/573,616

;; FILING DATE: 24-AUG-1990  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35199  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: <Unknown>  
;; INFORMATION FOR SEQ ID NO: 61:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-10-175-608-61

Query Match 100.0%; Score 1397; DB 4; Length 273;  
Best Local Similarity 100.0%; Pred. No. 8.5e-122; Mismatches 0; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRRNRTNNVDVTKLVANLPRDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRRNRTNNVDVTKLVANLPRDYMITLKYVPG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAKDFVASETSDCVVSTLSPEKDSRVST 180  
DB 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAKDFVASETSDCVVSTLSPEKDSRVST 180  
QY 181 KPFMLPPVAASSLRNDSNNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
DB 181 KPFMLPPVAASSLRNDSNNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273  
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

## RESULT 7

US-10-620-642-49  
; Sequence 49, Application US/10620642  
; Publication No. US20050080250A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; ; Bosseiman, Robert A.  
; ; Suggs, Sidney V.  
; ; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA: US/10/620,642  
; APPLICATION NUMBER: US/10/620,642  
; FILING DATE: 16-Jul-2003

;; CLASSIFICATION: <Unknown>  
;; PRIOR APPLICATION DATA:  
;; APPLICATION NUMBER: US/10/175,608  
;; FILING DATE: 16-Oct-2002  
;; APPLICATION NUMBER: 09/635,249  
;; FILING DATE: 07-AUG-2000  
;; APPLICATION NUMBER: 09/486,546  
;; FILING DATE: 24-MAY-1995  
;; APPLICATION NUMBER: 08/172,329  
;; FILING DATE: 21-DEC-1993  
;; APPLICATION NUMBER: 07/982,255  
;; FILING DATE: 25-NOV-1992  
;; APPLICATION NUMBER: 07/684,535  
;; FILING DATE: 10-APR-1991  
;; APPLICATION NUMBER: 09/589,701  
;; FILING DATE: 10-OCT-1991  
;; APPLICATION NUMBER: 07/573,616  
;; FILING DATE: 24-AUG-1990  
;; APPLICATION NUMBER: 07/537,198  
;; FILING DATE: 11-JUN-1990  
;; APPLICATION NUMBER: 07/422,383  
;; FILING DATE: 16-OCT-1989  
;; ATTORNEY/AGENT INFORMATION:  
;; NAME: Clough, David W.  
;; REGISTRATION NUMBER: 36,107  
;; REFERENCE/DOCKET NUMBER: 01017/35199  
;; TELECOMMUNICATION INFORMATION:  
;; TELEPHONE: 312/474-6300  
;; TELEFAX: 312/474-0448  
;; TELEX: <Unknown>  
;; INFORMATION FOR SEQ ID NO: 49:  
;; SEQUENCE CHARACTERISTICS:  
;; LENGTH: 273 amino acids  
;; TYPE: amino acid  
;; STRANDEDNESS: single  
;; TOPOLOGY: linear  
;; MOLECULE TYPE: protein  
;; SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-10-620-642-49

Query Match 100.0%; Score 1397; DB 5; Length 273;  
Best Local Similarity 100.0%; Pred. No. 8.5e-122; Mismatches 0; Indels 0; Gaps 0;  
Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRRNRTNNVDVTKLVANLPRDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRRNRTNNVDVTKLVANLPRDYMITLKYVPG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAKDFVASETSDCVVSTLSPEKDSRVST 180  
DB 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAKDFVASETSDCVVSTLSPEKDSRVST 180  
QY 181 KPFMLPPVAASSLRNDSNNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
DB 181 KPFMLPPVAASSLRNDSNNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
QY 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273  
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

## RESULT 8

US-10-620-642-61  
; Sequence 61, Application US/10620642  
; Publication No. US20050080250A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; ; Bosseiman, Robert A.  
; ; Suggs, Sidney V.

```

; Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/620,642
; FILING DATE: 16-Jul-2003
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/10/175,608
; FILING DATE: 16-Oct-2002
; APPLICATION NUMBER: 09/635,249
; FILING DATE: 07-AUG-2000
; APPLICATION NUMBER: 09/486,546
; FILING DATE: 24-MAY-1995
; APPLICATION NUMBER: 08/172,329
; FILING DATE: 21-DEC-1993
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; APPLICATION NUMBER: 07/684,535
; FILING DATE: 10-APR-1991
; APPLICATION NUMBER: 09/589,701
; FILING DATE: 10-OCT-1991
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 61:
;
; US-10-620-642-61
;
; Query Match 100.0%; Score 1397; DB 5; Length 273;
; Best Local Similarity 100.0%; Pred. No. 8.5e-122;
; Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
;
; QY 1 MKKTQTWLTCTYQLLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
; DB 1 MKKTQTWLTCTYQLLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60
;
; QY 61 MDVLPESHCHWISVMVQLSDLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECKVENS 120
; DB 61 MDVLPESHCHWISVMVQLSDLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECKVENS 120
;
; QY 121 KDLKSKFSKPEPRLTPTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVST 180
; DB 121 KDLKSKFSKPEPRLTPTPEFFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKDSRVST 180
;
; 181 KPFLPPVAASSLRNDSSSNRKNKPPGSSSLHWAAMALPALFSLIIGFAFGALYWKCR 240
; 181 KPFLPPVAASSLRNDSSSNRKNKPPGSSSLHWAAMALPALFSLIIGFAFGALYWKCR 240
;
; QY 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273
; DB 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFOEV 273
;
; RESULT 9
; US-09-005-243-48
; Sequence 48, Application US/09005243
; Patent No. US20020018763A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Krisztina M.
; APPLICANT: Bosseiman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/005,243
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/34465
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 48:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; MOLECULE TYPE: protein
; US-09-005-243-48
;
; Query Match 99.6%; Score 1392; DB 3; Length 273;
; Best Local Similarity 99.6%; Pred. No. 2.5e-121;
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; APPLICATION NUMBER: 08/172,329
; FILING DATE: 21-DEC-1993
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; APPLICATION NUMBER: 07/684,535
; FILING DATE: 10-APR-1991
; APPLICATION NUMBER: 09/589,701
; FILING DATE: 10-OCT-1991
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
;
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
;
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
;
; INFORMATION FOR SEQ ID NO: 48:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 48:
US-10-175-608-48

Query Match          99.6%; Score 1392; DB 4; Length 273;
Best Local Similarity 99.6%; Pred. No. 2.5e-121;
Matches 272; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLLFNPVLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60
DB 1 MKKTQTWLTCTIYLQLLLFNPVLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISBMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120
DB 61 MDVLPSCWISBMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
DB 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSSSNRKNKPNPGDSSLHWAAMALPALFSLIIGFAFGALYWK 240
DB 181 KPFMLPPVAASSLRNDSSSNRKNKPNPGDSSLHWAAMALPALFSLIIGFAFGALYWK 240

QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273
DB 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273

RESULT 12
US-10-620-642-48
; Sequence 48, Application US/10620642
; Publication No. US20050080250A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; Bosselman, Robert A.
; Suggs, Sidney V.
; Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America

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; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/620,642
; FILING DATE: 16-Jul-2003
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/10/175,608
; FILING DATE: 16-Oct-2002
; APPLICATION NUMBER: 09/635,249
; FILING DATE: 07-AUG-2000
; APPLICATION NUMBER: 09/486,546
; FILING DATE: 24-MAY-1995
; APPLICATION NUMBER: 08/172,329
; FILING DATE: 21-DEC-1993
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; APPLICATION NUMBER: 07/684,535
; FILING DATE: 10-APR-1991
; APPLICATION NUMBER: 09/589,701
; FILING DATE: 10-OCT-1991
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
;
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
;
; INFORMATION FOR SEQ ID NO: 48:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 48:
US-10-620-642-48

Query Match          99.6%; Score 1392; DB 5; Length 273;
Best Local Similarity 99.6%; Pred. No. 2.5e-121;
Matches 272; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLLFNPVLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60
DB 1 MKKTQTWLTCTIYLQLLLFNPVLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISBMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120
DB 61 MDVLPSCWISBMVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
DB 121 KDLKSKSPKSPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180

QY 181 KPFMLPPVAASSLRNDSSSNRKNKPNPGDSSLHWAAMALPALFSLIIGFAFGALYWK 240
DB 181 KPFMLPPVAASSLRNDSSSNRKNKPNPGDSSLHWAAMALPALFSLIIGFAFGALYWK 240

QY 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273
DB 241 QPSLTRAVENTIQINEEDNEISMLOKEREFOEV 273

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RESULT 13  
US-09-005-243-50  
; Sequence 50, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 50:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; US-09-005-243-50

Query Match 98.9%; Score 1381; DB 3; Length 273;  
Best Local Similarity 98.9%; Pred. No. 2.7e-120;  
Matches 270; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 MKKQTWLTCTIYQLLNFNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKQTWLTCTIYQLLNFNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISMMVQVLSLTDLLDKFNSISGLSNYSIIIDKLVNIVDDLVECVKENS 120

Db 61 MDVLPSCWISMMVQVLSLTDLLDKFNSISGLSNYSIIIDKLVNIVDDLVECVKENS 120  
QY 121 KDLKSKFSKSPRLFTPEFFRIFNRSIDAFKDFVVASSETSCVWSSTLSPEKDSRVSVT 180  
Db 121 KDLKSKFSKSPRLFTPEFFRIFNRSIDAFKDFVVASSETSCVWSSTLSPEKDSRVSVT 180  
QY 181 KPFMLPPVAASSLRNDSSSNRKAQNPDPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
Db 181 KPFMLPPVAASSLRNDSSSNRKAQNPDPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
QY 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFQEV 273  
Db 241 QPSLTRAVENTIQINEEDNEISMLQEKEREFQEV 273

RESULT 14  
US-09-224-683-50  
; Sequence 50, Application US/09224683  
; Patent No. US20020031491A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,683  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35136  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856

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; INFORMATION FOR SEQ ID NO: 50:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-224-683-50

Query Match      98.9%; Score 1381; DB 3; Length 273;
Best Local Similarity 98.9%; Pred. No. 2.7e-120;
Matches 270; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPVKTEGICRNRVTNNVKDVTGLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTWLTCTIYLQLLFNPVKTEGICRNRVTNNVKDVTGLVANLPKDYMITLKYPVG 60

Qy 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120
Db 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120

Qy 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDFVAVSETSDCVVSTLSPEKDSRVST 180
Db 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDFVAVSETSDCVVSTLSPEKDSRVST 180

Qy 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240
Db 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240

Qy 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273
Db 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

RESULT 15
US-10-175-608-50
; Sequence 50, Application US/10175608
; Publication No. US200401810441
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; Bosselman, Robert A.
; Suggs, Sidney V.
; Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/175,608
; FILING DATE: 16-Oct-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/635,249
; FILING DATE: 07-AUG-2000
; APPLICATION NUMBER: 09/486,546
; FILING DATE: 24-MAY-1995
; APPLICATION NUMBER: 08/172,329
; FILING DATE: 21-DEC-1993
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; APPLICATION NUMBER: 07/684,535
; FILING DATE: 10-APR-1991
; APPLICATION NUMBER: 09/589,701

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; FILING DATE: 10-OCT-1991
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 50:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 50:
US-10-175-608-50

Query Match      98.9%; Score 1381; DB 4; Length 273;
Best Local Similarity 98.9%; Pred. No. 2.7e-120;
Matches 270; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPVKTEGICRNRVTNNVKDVTGLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTWLTCTIYLQLLFNPVKTEGICRNRVTNNVKDVTGLVANLPKDYMITLKYPVG 60

Qy 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120
Db 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120

Qy 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDFVAVSETSDCVVSTLSPEKDSRVST 180
Db 121 KDLKSKSPKSPRLFTPEEPFRIFNRSIDAFKDFVAVSETSDCVVSTLSPEKDSRVST 180

Qy 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240
Db 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWK 240

Qy 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273
Db 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

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Search completed: February 22, 2006, 18:26:55  
Job time : 109.05 sec

GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:22:17 ; Search time 10.5289 Seconds  
(without alignments)  
386.005 Million cell updates/sec

Title: US-10-620-642-61

Perfect score: 1397

Sequence: 1 MKKTQTWLTCTIYLQLLFN.....NEEDNEISMLQKRRFQEV 273

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 117670 seqs, 14887254 residues

Total number of hits satisfying chosen parameters: 117670

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications\_AA\_New:\*

1: /cgn2\_6/ptodata/2/pubpaa/US08\_NEW\_PUB.pap.\*  
2: /cgn2\_6/ptodata/2/pubpaa/US06\_NEW\_PUB.pap.\*  
3: /cgn2\_6/ptodata/2/pubpaa/US07\_NEW\_PUB.pap.\*  
4: /cgn2\_6/ptodata/2/pubpaa/PCT\_NEW\_PUB.pap.\*  
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8: /cgn2\_6/ptodata/2/pubpaa/US60\_NEW\_PUB.pap.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1397	100.0	273	6	US-10-353-783-49
2	1397	100.0	273	6	US-10-353-783-61
3	1392	99.6	273	6	US-10-353-783-48
4	1381	98.9	273	6	US-10-353-783-50
5	1265	90.6	248	6	US-10-519-390-24
6	1265	90.6	248	7	US-11-176-830-206
7	1263	90.4	248	7	US-11-176-830-520
8	1263	90.4	248	7	US-11-176-830-537
9	1262	90.3	248	7	US-11-176-830-519
10	1262	90.3	248	7	US-11-176-830-529
11	1262	90.3	248	7	US-11-176-830-536
12	1262	90.3	248	7	US-11-176-830-538
13	1261	90.3	248	7	US-11-176-830-499
14	1261	90.3	248	7	US-11-176-830-500
15	1261	90.3	248	7	US-11-176-830-501
16	1261	90.3	248	7	US-11-176-830-513
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18	1261	90.3	248	7	US-11-176-830-521
19	1261	90.3	248	7	US-11-176-830-523
20	1261	90.3	248	7	US-11-176-830-527
21	1261	90.3	248	7	US-11-176-830-535
22	1260	90.2	248	7	US-11-176-830-502
23	1260	90.2	248	7	US-11-176-830-506
24	1260	90.2	248	7	US-11-176-830-508
25	1260	90.2	248	7	US-11-176-830-510

#### ALIGNMENTS

##### RESULT 1

US-10-353-783-49

; Sequence 49, Application US/10353783

; Publication No. US20050261175A1

; GENERAL INFORMATION:

; APPLICANT: Zeebo, Kristina M.

; Bosseiman, Robert A.

; Suggs, Sidney V.

; Martin, Francis H.

; TITLE OF INVENTION: Stem Cell Factor

; NUMBER OF SEQUENCES: 104

; CORRESPONDENCE ADDRESS:

; ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: United States of America

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patentin Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/353,783

; FILING DATE: 28-Jan-2003

; CLASSIFICATION: <Unknown>

; PRIORITY DATA:

; APPLICATION NUMBER: 08/448,729

; FILING DATE: 24-MAY-1995

; APPLICATION NUMBER: 08/172,329

; FILING DATE: 21-DEC-1993

; APPLICATION NUMBER: 07/982,255

; FILING DATE: 25-NOV-1992

; APPLICATION NUMBER: 07/684,535

; FILING DATE: 10-APR-1991

; APPLICATION NUMBER: 07/589,701

; FILING DATE: 01-OCT-1990

; APPLICATION NUMBER: 07/573,616

; FILING DATE: 24-AUG-1990

; APPLICATION NUMBER: 07/537,198

; FILING DATE: 11-JUN-1990

; APPLICATION NUMBER: 07/422,383

; FILING DATE: 16-OCT-1989

; ATTORNEY/AGENT INFORMATION:

; NAME: Clough, David W.

; REGISTRATION NUMBER: 36,107

; REFERENCE/DOCKET NUMBER: 01017/32958A

Sequence 512, App  
Sequence 514, App  
Sequence 518, App  
Sequence 522, App  
Sequence 524, App  
Sequence 528, App  
Sequence 530, App  
Sequence 531, App  
Sequence 534, App  
Sequence 539, App  
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Sequence 544, App  
Sequence 548, App  
Sequence 550, App  
Sequence 551, App  
Sequence 515, App  
Sequence 525, App  
Sequence 541, App  
Sequence 516, App

TELECOMMUNICATION INFORMATION:  
 TELEPHONE: 312/474-6300  
 TELEFAX: 312/474-0448  
 TELEX: <Unknown>  
 INFORMATION FOR SEQ ID NO: 49:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 273 amino acids  
 TYPE: amino acid  
 STRANDEDNESS: single  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein  
 SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
 US-10-353-783-49

Query Match 100.0%; Score 1397; DB 6; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 8.2e-118;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
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 DB 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRVTNNVVDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120  
 QY 121 KDLKSKFSPRLPTPEEPRIFNRSIDAKDFVASETSDCVVSSSTLSPEKDSRVST 180  
 DB 121 KDLKSKFSPRLPTPEEPRIFNRSIDAKDFVASETSDCVVSSSTLSPEKDSRVST 180  
 QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
 DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
 QY 241 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 273  
 DB 241 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 273

RESULT 2  
 US-10-353-783-61  
 Sequence 61, Application US/10353783  
 Publication No. US20050261175A1  
 GENERAL INFORMATION:  
 APPLICANT: Zeebo, Kristina M.  
 Bosselman, Robert A.  
 Suggs, Sidney V.  
 Martin, Francis H.  
 TITLE OF INVENTION: Stem Cell Factor  
 NUMBER OF SEQUENCES: 104  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 STREET: 6300 Sears Tower, 233 South Wacker Drive  
 CITY: Chicago  
 STATE: Illinois  
 COUNTRY: United States of America  
 ZIP: 60606-6402  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patent in Release #1.0, Version #1.30  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/10/353,783  
 FILING DATE: 28-Jan-2003  
 CLASSIFICATION: <Unknown>  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: 08/448,729  
 FILING DATE: 24-MAY-1995  
 APPLICATION NUMBER: 08/172,329  
 FILING DATE: 21-DEC-1993  
 APPLICATION NUMBER: 07/982,255  
 FILING DATE: 25-NOV-1992

APPLICATION NUMBER: 07/684,535  
 FILING DATE: 10-APR-1991  
 APPLICATION NUMBER: 07/589,701  
 FILING DATE: 01-OCT-1990  
 APPLICATION NUMBER: 07/573,616  
 FILING DATE: 24-AUG-1990  
 APPLICATION NUMBER: 07/537,198  
 FILING DATE: 11-JUN-1990  
 APPLICATION NUMBER: 07/422,383  
 FILING DATE: 16-OCT-1989  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Clough, David W.  
 REGISTRATION NUMBER: 36,107  
 REFERENCE/DOCKET NUMBER: 01017/32958A  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: 312/474-6300  
 TELEFAX: 312/474-0448  
 TELEX: <Unknown>  
 INFORMATION FOR SEQ ID NO: 61:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 273 amino acids  
 TYPE: amino acid  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein  
 SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
 US-10-353-783-61  
 Query Match 100.0%; Score 1397; DB 6; Length 273;  
 Best Local Similarity 100.0%; Pred. No. 8.2e-118;  
 Matches 273; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRVTNNVVDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRVTNNVVDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120  
 QY 121 KDLKSKFSPRLPTPEEPRIFNRSIDAKDFVASETSDCVVSSSTLSPEKDSRVST 180  
 DB 121 KDLKSKFSPRLPTPEEPRIFNRSIDAKDFVASETSDCVVSSSTLSPEKDSRVST 180  
 QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
 DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 240  
 QY 241 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 273  
 DB 241 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 273

RESULT 3  
 US-10-353-783-48  
 Sequence 48, Application US/10353783  
 Publication No. US20050261175A1  
 GENERAL INFORMATION:  
 APPLICANT: Zeebo, Kristina M.  
 Bosselman, Robert A.  
 Suggs, Sidney V.  
 Martin, Francis H.  
 TITLE OF INVENTION: Stem Cell Factor  
 NUMBER OF SEQUENCES: 104  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
 STREET: 6300 Sears Tower, 233 South Wacker Drive  
 CITY: Chicago  
 STATE: Illinois  
 COUNTRY: United States of America  
 ZIP: 60606-6402  
 COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 48:  
US-10-353-783-48

Query Match 99.6%; Score 1392; DB 6; Length 273;  
Best Local Similarity 99.6%; Pred. No. 2.3e-117;  
Matches 272; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTYQLQLFNPVLVTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTQTWLTCTYQLQLFNPVLVTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
Db 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKSPKPEPRLTPTPEFFRIFNRSIDAFKDFVAVSETSDCVVSSSTLSPKDSRVSVT 180  
Db 121 KDLKSKSPKPEPRLTPTPEFFRIFNRSIDAFKDFVAVSETSDCVVSSSTLSPKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWKKR 240  
Db 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWPAMALPALFSLIIGFAPGALYWKKR 240  
QY 241 QPSLTRAVENTQINEEDNEISMLOKEREFEQEV 273  
Db 241 QPSLTRAVENTQINEEDNEISMLOKEREFEQEV 273

RESULT 4  
US-10-353-783-50  
Sequence 50, Application US/10353783  
Publication No. US20050261175A1  
GENERAL INFORMATION:  
APPLICANT: Zaebo, Kristina M.  
Bosselman, Robert A.  
Suggs, Sidney V.

Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 50:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 50:  
US-10-353-783-50  
Query Match 98.9%; Score 1381; DB 6; Length 273;  
Best Local Similarity 98.9%; Pred. No. 2.2e-116;  
Matches 270; Conservative 0; Mismatches 3; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTYQLQLFNPVLVTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTQTWLTCTYQLQLFNPVLVTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
Db 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKSPKPEPRLTPTPEFFRIFNRSIDAFKDFVAVSETSDCVVSSSTLSPKDSRVSVT 180  
Db 121 KDLKSKSPKPEPRLTPTPEFFRIFNRSIDAFKDFVAVSETSDCVVSSSTLSPKDSRVSVT 180  
QY 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWKKR 240  
Db 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPAFFSLIIGFAPGALYWKKR 240

Qy 241 QPSLTRAVENTIINEEDNEISMLQKEREFOEV 273  
Db 241 QPSLTRAVENTIINEEDNEISMLQKEREFOEV 273

RESULT 5  
US-10-519-390-24  
; Sequence 24, Application US/10519390  
; Publication No. US20060008972A1  
; GENERAL INFORMATION:  
; APPLICANT: MEDEXGEN Inc.  
; APPLICANT: CHUNG, Yong-Hoon  
; APPLICANT: LEE, Hak-sup  
; APPLICANT: YI, Ki-Wan  
; APPLICANT: KIM, Jae-Youn  
; APPLICANT: HEO, Youn-Hwa  
; TITLE OF INVENTION: A method of improving efficacy of biological response-modifying  
; FILE REFERENCE:  
; CURRENT APPLICATION NUMBER: US/10/519,390  
; CURRENT FILING DATE: 2004-12-23  
; PRIOR APPLICATION NUMBER: KR10-2003-0051846  
; PRIOR FILING DATE: 2003-07-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: Kopatentin 1.71  
; SEQ ID NO 24  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: SCF: 63rd, 102nd, 110th, 115th, 116th, 119th, 126th, 129th,  
; OTHER INFORMATION: 158th, 199th, 205th, 207th or 245th Phe is replaced by Val.  
US-10-519-390-24

Query Match 90.6%; Score 1265; DB 6; Length 248;  
Best Local Similarity 100.0%; Pred. No. 4.7e-106;  
Matches 248; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 26 EGICRNRVTNNVKDVTKLIVANLPKDYMITLKYPGMDVLPSCWISWMVQLSDSLTDL 85  
Db 1 EGICRNRVTNNVKDVTKLIVANLPKDYMITLKYPGMDVLPSCWISWMVQLSDSLTDL 60

Qy 86 DKFSNISEGLSNYSIIDKLIVNIVDDLVKVCVENSCKDKKSKSPPEPLFTPEEFFRIFN 145  
Db 61 DKFSNISEGLSNYSIIDKLIVNIVDDLVKVCVENSCKDKKSKSPPEPLFTPEEFFRIFN 120

Qy 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPPMLPPVAASSLRNDSSSSNRKAK 205  
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPPMLPPVAASSLRNDSSSSNRKAK 180

Qy 206 NPPGDSLSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIINEEDNEISMLQ 265  
Db 181 NPPGDSLSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIINEEDNEISMLQ 240

Qy 266 KEREFOEV 273  
Db 241 KEREFOEV 248

RESULT 6  
US-11-176-830-206  
; Sequence 206, Application US/11176830  
; Publication No. US20060020116A1  
; GENERAL INFORMATION:  
; APPLICANT: Gantier, Rene  
; APPLICANT: Guyon, Thierry  
; APPLICANT: Drittanti, Lila  
; APPLICANT: Vega, Manuel  
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
; FILE REFERENCE: 17109-012002 (922B)  
; CURRENT APPLICATION NUMBER: US/11/176,830

; CURRENT FILING DATE: 2005-07-06  
; PRIOR APPLICATION NUMBER: 10/658,834  
; PRIOR FILING DATE: 2003-09-08  
; PRIOR APPLICATION NUMBER: 60/457,135  
; PRIOR FILING DATE: 2003-03-21  
; PRIOR APPLICATION NUMBER: 60/409,898  
; PRIOR FILING DATE: 2002-09-09  
; NUMBER OF SEQ ID NOS: 1306  
; SOFTWARE: FastSEQ for Windows Version 4.0  
; SEQ ID NO 206  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
; PUBLICATION INFORMATION:  
; DATABASE ACCESSION NUMBER: Genbank AAA85450  
; DATABASE ENTRY DATE: 1996-01-19  
US-11-176-830-206

Query Match 90.6%; Score 1265; DB 7; Length 248;  
Best Local Similarity 100.0%; Pred. No. 4.7e-106;  
Matches 248; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 26 EGICRNRVTNNVKDVTKLIVANLPKDYMITLKYPGMDVLPSCWISWMVQLSDSLTDL 85  
Db 1 EGICRNRVTNNVKDVTKLIVANLPKDYMITLKYPGMDVLPSCWISWMVQLSDSLTDL 60

Qy 86 DKFSNISEGLSNYSIIDKLIVNIVDDLVKVCVENSCKDKKSKSPPEPLFTPEEFFRIFN 145  
Db 61 DKFSNISEGLSNYSIIDKLIVNIVDDLVKVCVENSCKDKKSKSPPEPLFTPEEFFRIFN 120

Qy 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPPMLPPVAASSLRNDSSSSNRKAK 205  
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPPMLPPVAASSLRNDSSSSNRKAK 180

Qy 206 NPPGDSLSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIINEEDNEISMLQ 265  
Db 181 NPPGDSLSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIINEEDNEISMLQ 240

Qy 266 KEREFOEV 273  
Db 241 KEREFOEV 248

RESULT 7  
US-11-176-830-520  
; Sequence 520, Application US/11176830  
; Publication No. US20060020116A1  
; GENERAL INFORMATION:  
; APPLICANT: Gantier, Rene  
; APPLICANT: Guyon, Thierry  
; APPLICANT: Drittanti, Lila  
; APPLICANT: Vega, Manuel  
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
; FILE REFERENCE: 17109-012002 (922B)  
; CURRENT APPLICATION NUMBER: US/11/176,830  
; CURRENT FILING DATE: 2005-07-06  
; PRIOR APPLICATION NUMBER: 10/658,834  
; PRIOR FILING DATE: 2003-09-08  
; PRIOR APPLICATION NUMBER: 60/457,135  
; PRIOR FILING DATE: 2003-03-21  
; PRIOR APPLICATION NUMBER: 60/409,898  
; PRIOR FILING DATE: 2002-09-09  
; NUMBER OF SEQ ID NOS: 1306  
; SOFTWARE: FastSEQ for Windows Version 4.0  
; SEQ ID NO 520  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-176-830-520

Query Match 90.4%; Score 1263; DB 7; Length 248;  
Best Local Similarity 99.6%; Pred. No. 7e-106;

	Matches	247;	Conservative	1;	Mismatches	0;	Indels	0;	Gaps	0;
Qy	26	EGICRNRVTNNKDVTKLVANL	PKDYMITLKYVPGMDVLP	SHCWISEM	VVQLSDSLTDLL	85				
Db	1	EGICRNRVTNNKDVTKLVANL	PKDYMITLKYVPGMDVLP	SHCWISEM	VVQLSDSLTDLL	60				
Qy	86	DKFSNISEGLSNYSIIIDKL	VNIVDLVECVKENS	KDKKSKFKSP	EPRLFTPEEF	145				
Db	61	DKFSNISEGLSNYSIIIDKL	VNIVDLVECVKENS	KDKKSKFKSP	EPRLFTPEEF	120				
Qy	146	RSIDAPKDFVVASSTSCV	SVSTLSPBKDS	RVSVTKP	FMLPPVAASSLR	205				
Db	121	RSIDAPKDFVVASSTSCV	SVSTLSPBKDS	RVSVTKP	FMLPPVAASSLR	180				
Qy	206	NPPGDSLSLHWAAMAL	PALFSLIIGFAP	GALYKKRKQ	PSLTRA	VNIQIN	NEEDNEIS	MLQE	265	
Db	181	NPPGDSLSLHWAAMAL	PALFSLIIGFAP	GALYKKRKQ	PSLTRA	VNIQIN	NEEDNEIS	MLQE	240	
Qy	266	KEREFQEV	273							
Db	241	KEREFQEV	248							

```

RESULT 8
US-11-176-830-537
; Sequence 537, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; FILE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/558,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: Fast-SEQ for Windows Version 4.0
; SEQ ID NO 537
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-537

```

Query Match	90.4%;	Score 1263;	DB 7;	Length 248;
Best Local Similarity	99.6%;	Pred. No. 7e-106;		
Matches 247;	Conservative 1;	Mismatches 0;	Indels 0;	Gaps 0;
Qy	26	EGICRNRVTNNVDVTKLVANLPKDYMITLKYVPGMDVLPFSHCWISWVQVLSLTDLL	85	
Db	1	EGICRNRVTNNVDVTKLVANLPKDYMITLKYVPGMDVLPFSHCWISWVQVLSLTDLL	60	
Qy	86	DKFSNISSEGLSNYSIIDKLVNIIVDDLVEVCKENSSKDLKKSKFSKPEPRLFTPEEFPRIFN	145	
Db	61	DKFSNISSEGLSNYSIIDKLVNIIVDDLVEVCKENSSKDLKKSKFSKPEPRITPPEEFPRIFN	120	
Qy	146	RSIDAPKDFVVASSETSCVSVSTLSPKDSRVSVTKPFMLPPVAASLRINDSSSSNRKAK	205	
Db	121	RSIDAPKDFVVASSETSCVSVSTLSPKDSRVSVTKPFMLPPVAASLRINDSSSSNRKAK	180	
Qy	206	NPGDSSLHWAAMALPALFSIIIGFAPGALYWKKQPSLTRAZENIQINNEEDNEISMLOE	265	
Db	181	NPGDSSLHWAAMALPALFSIIIGFAPGALYWKKQPSLTRAZENIQINNEEDNEISMLOE	240	
Qy	266	KEREPOREV	273	

Db 241 KEREFQEV 248

RESULT 9

US-11-176-830-519

; Sequence 519, Application US/11176830

; Publication No. US20060020116A1

; GENERAL INFORMATION:

; APPLICANT: Gantier, Rene

; APPLICANT: Guyon, Thierry

; APPLICANT: Drittanti, Lila

; APPLICANT: Vega, Manuel

; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, En

; TITLE OF INVENTION: Acid Molecules and Related Applications

; FILE REFERENCE: 17109-012002 (922B)

; CURRENT APPLICATION NUMBER: US/11/176,830

; CURRENT FILING DATE: 2005-07-06

; PRIOR APPLICATION NUMBER: 10/658,834

; PRIOR FILING DATE: 2003-09-08

; PRIOR APPLICATION NUMBER: 60/457,135

; PRIOR FILING DATE: 2003-03-21

; PRIOR APPLICATION NUMBER: 60/409,898

; PRIOR FILING DATE: 2002-09-09

; NUMBER OF SEQ ID NOS: 1306

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 519

; LENGTH: 248

; TYPE: PRT

; ORGANISM: Homo sapiens

US-11-176-830-519

Query Match 90.3%; Score 1262; DB 7; Length 248;

Best Local Similarity 99.6%; Pred. NO. 8.6e-106;

Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 26 EGI<sup>CR</sup>NRVTVNNKDVTKLVANLPKDYMTILKYYPGMDVLP<sup>SH</sup>CHWIS<sup>EM</sup>VQLSDSLTDL 85

Db 1 EGI<sup>CR</sup>NRVTVNNKDVTKLVANLPKDYMTILKYYPGMDVLP<sup>SH</sup>CHWIS<sup>EM</sup>VQLSDSLTDL 60

Qy 86 DKFSNISEGLSNYSIIDKLVNIVDDLVE<sup>CV</sup>KNSSKD<sup>LK</sup>SKSP<sup>EP</sup>RLFTPEEPFRIFN 145

Db 61 DKFSNISEGLSNYSIIDKLVNIVDDLVE<sup>CV</sup>KNSSKD<sup>LK</sup>SKSP<sup>EP</sup>RLFTPEEPFRIFN 120

Qy 146 RSIDAFKDFVA<sup>SE</sup>TSDCVVSTLSPEKDSRVSTKPFMLPPVAASLRNDSSSSNRKAK 205

Db 121 RSIDAFKDFVA<sup>SE</sup>TSDCVVSTLSPEKDSRVSTKPFMLPPVAASLRNDSSSSNRKAK 180

Qy 206 NPGDSSLSHWAANLPALPSLIIGFAFGALYKKRQPSLTRAVENIQINEEDNEISMLQE 265

Db 181 NPGDSSLSHWAANLPALPSLIIGFAFGALYKKRQPSLTRAVENIQINEEDNEISMLQE 240

Qy 266 KEREFQEV 273

Db 241 KEREFQEV 248

RESULT 10

US-11-176-830-529

; Sequence 529, Application US/11176830

; Publication No. US20060020116A1

; GENERAL INFORMATION:

; APPLICANT: Gantier, Rene

; APPLICANT: Guyon, Thierry

; APPLICANT: Drittanti, Lila

; APPLICANT: Vega, Manuel

; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, En

; TITLE OF INVENTION: Acid Molecules and Related Applications

; FILE REFERENCE: 17109-012002 (922B)

; CURRENT APPLICATION NUMBER: US/11/176,830

; CURRENT FILING DATE: 2005-07-06

; PRIOR APPLICATION NUMBER: 10/658,834

; PRIOR FILING DATE: 2003-09-08

; PRIOR APPLICATION NUMBER: 60/457,135

;  
; PRIOR FILING DATE: 2003-03-21  
; PRIOR APPLICATION NUMBER: 60/409,898  
; PRIOR FILING DATE: 2002-09-09  
; NUMBER OF SEQ ID NOS: 1306  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 529  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-176-830-529

Query Match 90.3%; Score 1262; DB 7; Length 248;  
Best Local Similarity 99.6%; Pred. No. 8.6e-106;  
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 26 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWCWISMMVQVLSLTDLL 85  
Db 1 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWCWISMMVQVLSLTDLL 60  
Qy 86 DKFSNISSEGLSNYSIIDKLNVIVDDLVCEVKENSSKDKKSKFSPPEPRFTPEEPFRIFN 145  
Db 61 DKFSNISSEGLSNYSIIDKLNVIVDDLVCEVKENSSKDKKSKFSPPEPRFTPEEPFRIFN 120  
Qy 146 RSIDAFKDFVVASSETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 205  
Db 121 RSIDAFKDFVVASSETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
Qy 206 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLOE 265  
Db 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLOE 240  
Qy 266 KEREFOEV 273  
Db 241 KEREFOEV 248

RESULT 11  
US-11-176-830-536  
; Sequence 536, Application US/11176830  
; Publication No. US20060020116A1  
; GENERAL INFORMATION:  
; APPLICANT: Gantier, Rene  
; APPLICANT: Guyon, Thierry  
; APPLICANT: Drittanti, Lila  
; APPLICANT: Vega, Manuel  
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
; FILE REFERENCE: 17109-012002 (922B)  
; CURRENT APPLICATION NUMBER: US/11/176,830  
; CURRENT FILING DATE: 2005-07-06  
; PRIOR APPLICATION NUMBER: 10/658,834  
; PRIOR FILING DATE: 2003-09-08  
; PRIOR APPLICATION NUMBER: 60/457,135  
; PRIOR FILING DATE: 2003-03-21  
; PRIOR APPLICATION NUMBER: 60/409,898  
; PRIOR FILING DATE: 2002-09-09  
; NUMBER OF SEQ ID NOS: 1306  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 536  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-176-830-536

Query Match 90.3%; Score 1262; DB 7; Length 248;  
Best Local Similarity 99.6%; Pred. No. 8.6e-106;  
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 26 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWCWISMMVQVLSLTDLL 85  
Db 1 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWCWISMMVQVLSLTDLL 60  
Qy 86 DKFSNISSEGLSNYSIIDKLNVIVDDLVCEVKENSSKDKKSKFSPPEPRFTPEEPFRIFN 145

Db 61 DKFSNISSEGLSNYSIIDKLNVIVDDLVCEVKENSSKDKKSKFSPPEPRFTPEEPFRIFN 120  
Qy 146 RSIDAFKDFVVASSETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 205  
Db 121 RSIDAFKDFVVASSETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
Qy 206 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLOE 265  
Db 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLOE 240  
Qy 266 KEREFOEV 273  
Db 241 KEREFOEV 248

RESULT 12  
US-11-176-830-538  
; Sequence 538, Application US/11176830  
; Publication No. US20060020116A1  
; GENERAL INFORMATION:  
; APPLICANT: Gantier, Rene  
; APPLICANT: Guyon, Thierry  
; APPLICANT: Drittanti, Lila  
; APPLICANT: Vega, Manuel  
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
; FILE REFERENCE: 17109-012002 (922B)  
; CURRENT APPLICATION NUMBER: US/11/176,830  
; CURRENT FILING DATE: 2005-07-06  
; PRIOR APPLICATION NUMBER: 10/658,834  
; PRIOR FILING DATE: 2003-09-08  
; PRIOR APPLICATION NUMBER: 60/457,135  
; PRIOR FILING DATE: 2003-03-21  
; PRIOR APPLICATION NUMBER: 60/409,898  
; PRIOR FILING DATE: 2002-09-09  
; NUMBER OF SEQ ID NOS: 1306  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 538  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-176-830-538

Query Match 90.3%; Score 1262; DB 7; Length 248;  
Best Local Similarity 99.6%; Pred. No. 8.6e-106;  
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
Qy 26 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWCWISMMVQVLSLTDLL 85  
Db 1 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWCWISMMVQVLSLTDLL 60  
Qy 86 DKFSNISSEGLSNYSIIDKLNVIVDDLVCEVKENSSKDKKSKFSPPEPRFTPEEPFRIFN 145  
Db 61 DKFSNISSEGLSNYSIIDKLNVIVDDLVCEVKENSSKDKKSKFSPPEPRFTPEEPFRIFN 120  
Qy 146 RSIDAFKDFVVASSETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 205  
Db 121 RSIDAFKDFVVASSETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
Qy 206 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLOE 265  
Db 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLOE 240  
Qy 266 KEREFOEV 273  
Db 241 KEREFOEV 248

RESULT 13  
US-11-176-830-499  
; Sequence 499, Application US/11176830  
; Publication No. US20060020116A1



```
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 499
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-499

Query Match          90.3%; Score 1261; DB 7; Length 248;
Best Local Similarity 99.6%; Pred. No. 1.1e-105;
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 205
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 180

QY 206 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKQPSLTRAVENTIQTNEEDNEISMLQ 265
DB 181 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKQPSLTRAVENTIQTNEEDNEISMLQ 240

QY 266 KEREFQEV 273
DB 241 KEREFQEV 248

RESULT 14
US-11-176-830-500
; Sequence 500, Application US/11/176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 500
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-500

Query Match          90.3%; Score 1261; DB 7; Length 248;
Best Local Similarity 99.6%; Pred. No. 1.1e-105;
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 205
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 180

QY 206 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKQPSLTRAVENTIQTNEEDNEISMLQ 265
DB 181 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKQPSLTRAVENTIQTNEEDNEISMLQ 240

QY 266 KEREFQEV 273
DB 241 KEREFQEV 248

RESULT 15
US-11-176-830-501
; Sequence 501, Application US/11/176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 501
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-501

Query Match          90.3%; Score 1261; DB 7; Length 248;
Best Local Similarity 99.6%; Pred. No. 1.1e-105;
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 205
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 180
```

```
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-500

Query Match          90.3%; Score 1261; DB 7; Length 248;
Best Local Similarity 99.6%; Pred. No. 1.1e-105;
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 205
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 180

QY 206 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKQPSLTRAVENTIQTNEEDNEISMLQ 265
DB 181 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKQPSLTRAVENTIQTNEEDNEISMLQ 240

QY 266 KEREFQEV 273
DB 241 KEREFQEV 248

RESULT 15
US-11-176-830-501
; Sequence 501, Application US/11/176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; TITLE OF INVENTION: Acid Molecules and Related Applications
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 501
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-501

Query Match          90.3%; Score 1261; DB 7; Length 248;
Best Local Similarity 99.6%; Pred. No. 1.1e-105;
Matches 247; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 26 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 85
DB 1 EGICRNRVTNNVKDVTKLVLNLPKDYMITLKVPQGMVLPKSHCWISEMVVQLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLNVNVDLVECVKENSCKDLKSKSPKSPRLFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 205
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPMLPPVAASSLRNDSSSSNRKAK 180
```

Qy	206	NPPGDSLIHWAAMALPALFSLIIGFAGALYWKXKQPSLTRAVENTIINEDNEISMLQE	265
Db	181	NPPGDSLIHWAAMALPALFSLIIGFAGALYWKXKQPSLTRAVENTIINEDNEISMLQE	240
Qy	266	KEREFQEV	273
Db	241	KEREFQEV	248

Search completed: February 22, 2006, 18:27:28  
Job time : 10.5289 secs

GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:05:41 ; Search time 144.098 Seconds  
(without alignments)  
747.047 Million cell updates/sec

Title: US-10-620-642-63

Perfect score: 1262

Sequence: 1 MKKTWTWLTCTIYLQLLFN.....NEEDNEISMLQKEREFRQEV 245

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A\_Geneseq\_21.\*

- 1: Geneseqp1980s.\*
- 2: Geneseqp1990s.\*
- 3: Geneseqp2000s.\*
- 4: Geneseqp2001s.\*
- 5: Geneseqp2002s.\*
- 6: Geneseqp2003as.\*
- 7: Geneseqp2003bs.\*
- 8: Geneseqp2004s.\*
- 9: Geneseqp2005s.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1262	100.0	245	2	Aar11712 Human Ste
2	1262	100.0	245	2	Aar83979 Human Ste
3	1262	100.0	245	4	Aab98368 Human SCF
4	1262	100.0	245	4	Aau02461 Human SCF
5	1262	100.0	245	4	Aab96953 Human SCF
6	1262	100.0	245	4	Aab73568 Human SCF
7	1262	100.0	245	4	Aau02767 Human SCF
8	1262	100.0	245	4	Aau05267 Human SCF
9	1262	100.0	245	5	Aae22327 Human SCF
10	1262	100.0	245	5	Abg95643 Human SCF
11	1262	100.0	245	7	Ades2491 Human Ste
12	1262	100.0	245	8	Adp99333 Human Ste
13	1262	100.0	245	8	Ades8051 Tumour tr
14	1262	100.0	245	8	Adu50663 Human SCF
15	1262	100.0	245	9	Adw93108 Human Ste
16	1262	100.0	245	9	Adz47560 Human Ste
17	1251.5	99.2	246	3	Aay53285 Human SCF
18	1231	97.5	273	2	Aar11711 Human Ste
19	1231	97.5	273	2	Aar20647 Human was
20	1231	97.5	273	2	Aar83978 Human Ste
21	1231	97.5	273	2	Aaw27607 Human rec
22	1231	97.5	273	3	Aay53284 Human SCF
23	1231	97.5	273	4	Aab98367 Human SCF
24	1231	97.5	273	4	Aab98357 Human SCF

25	1231	97.5	273	4	Aau02460 Human SCF
26	1231	97.5	273	4	Aab96942 Human Ste
27	1231	97.5	273	4	Aab96941 Human Ste
28	1231	97.5	273	4	Aab96952 Human Ste
29	1231	97.5	273	4	Aab73567 Human SCF
30	1231	97.5	273	4	Aau02766 Human SCF
31	1231	97.5	273	4	Aau05266 Human SCF
32	1231	97.5	273	5	Aae22326 Human SCF
33	1231	97.5	273	5	Abg95642 Human SCF
34	1231	97.5	273	7	Ades2477 Human Ste
35	1231	97.5	273	7	Ades2489 Human Ste
36	1231	97.5	273	7	Adn95540 Human BEC
37	1231	97.5	273	8	Adp99331 Human Ste
38	1231	97.5	273	8	Adp99319 Human Ste
39	1231	97.5	273	8	Adu50661 Human Ste
40	1231	97.5	273	8	Adu50649 Human Ste
41	1231	97.5	273	9	Adw93094 Human Ste
42	1231	97.5	273	9	Adw93106 Human Ste
43	1231	97.5	273	9	Adz47558 Human Ste
44	1231	97.5	273	9	Adz47546 Human Ste
45	1230	97.5	245	2	Aar20646 Human "De

## ALIGNMENTS

RESULT 1  
AAR11712  
ID AAR11712 standard; protein; 245 AA.  
XX  
AC AAR11712;  
XX  
DT 20-JUN-1991 (first entry)  
XX  
DB Human Stem Cell Factor from 5637 bladder carcinoma line.  
XX  
KW Stem cell factor; SCF; leukopenia; AIDS; haematopoiesis.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..25  
FT Protein /label= sig-peptide  
FT /label= mat\_protein  
XX  
PN EP423980-A.  
XX  
PD 24-APR-1991.  
XX  
PF 04-OCT-1990; 90EP-00310899.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 28-SEP-1990; 90WO-US005548.  
XX  
XX 01-OCT-1990; 90US-00589701.  
XX  
XX (AMGE-) AMGEN.  
XX  
XX Zsebo KM, Suggs SV, Bosselman RA, Martin FH;  
PI WPI, 1991-119233/17.  
XX  
XX N-PSDB; AAQ11543.  
XX  
XX New naturally-occurring polypeptide stem cell factor analogues - have  
XX haematopoietic biological activity of stem cell factor and are used to  
XX treat e.g. leukopenia, AIDS, nerve damage and infertility.  
XX  
XX Disclosure; Fig 44; 127pp; English.  
XX  
XX The SCF has the ability to stimulate growth of primitive progenitors  
XX including early hematopoietic progenitor cells and non- hematopoietic  
CC

CC stem cells such as neural stem cells and primordial germ stem cells. The  
CC product may be used in a pharmaceutical compsn. for treating, in a  
CC mammal, leukopenia, thrombocytopenia, anaemia, AIDS, neoplasia, nerve  
CC damage, infertility and intestinal damage. See also AAR11708, AAQ11509-  
CC Q11543  
XX  
SQ Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 2; Length 245;  
Best Local Similarity 100.0%; Pred. No. 3e-121;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLWNIYDDLVKCVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLWNIYDDLVKCVKENS 120  
Qy 121 KDLKSKFSKSPRLPTPEEPFRIFNRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180  
Db 121 KDLKSKFSKSPRLPTPEEPFRIFNRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180  
Qy 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Db 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Qy 241 EFQEV 245  
Db 241 EFQEV 245

RESULT 2  
AAR83979  
ID AAR83979 standard; protein; 245 AA.  
XX  
AC AAR83979;  
XX  
DT 25-MAR-2003 (revised)  
DT 15-MAY-1996 (first entry)  
XX  
DE Human stem cell factor derived from 5637 bladder carcinoma cell line.  
XX  
KW Stem cell factor; progenitor; haematopoiesis; SCF; anaemia;  
KW thrombocytopenia; leucopenia; AIDS; immunodeficiency; bone graft;  
KW transpl.; neoplasia; myelosuppression; bone marrow; ss.  
XX  
OS Homo sapiens.  
XX  
FH Key Location/Qualifiers  
FT Peptide 1..25  
FT /label= sig\_peptide  
FT Protein 26..245  
FT /label= mat\_SCF  
XX  
FN EP676470-A1.  
XX  
PD 11-OCT-1995.  
XX  
PF 04-OCT-1990; 9SEP-00105391.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 28-SEP-1990; 90WO-US005548.  
PR 01-OCT-1990; 90US-00589701.  
XX  
PA (AMGE-) AMGEN INC.  
XX  
PI Zsebo KM, Suggs SV, Bosselman RA, Martin FH;  
XX WPI; 1995-346090/45.  
DR

DR N-PSDB; AAT04891.  
XX  
PT New stem cell factor polypeptide(s) - for stimulating the growth of  
PT primitive progenitor cells, esp. for treating disorders involving blood  
PT cells.  
XX  
PS Claim 9; Fig 44; 127pp; English.  
XX  
CC AAR83979 is a human stem cell factor (SCF) derived from the 5637 bladder  
CC carcinoma cell line. Non-naturally occurring SCF and C-terminally  
CC truncated polypeptides, having amino acid sequences sufficiently  
CC duplicative of naturally occurring SCF, stimulate growth of primitive  
CC progenitors such as haematopoietic progenitor cells, neural stem cells  
CC and primordial germ stem cells. The peptides can be used in a composition  
CC for treating leucopenia, anaemia or thrombocytopenia, for enhancing  
CC engraftment of bone marrow during transplantation or for bone marrow  
CC recovery after chemotherapy or radiation-induced bone marrow aplasia or  
CC myelosuppression. They can also be used for treating neoplasia, nerve  
CC damage, infertility, intestinal damage or myeloproliferative disorders.  
CC Antibodies may be raised against the peptides for use in detection or  
CC neutralisation of SCF in serum. SCF may be useful for the treatment of  
CC AIDS and severe combined immunodeficiency (SCID) states alone or in  
CC combination with other factors such as IL-7. (Updated on 25-MAR-2003 to  
CC correct PF field.)  
XX  
SQ Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 2; Length 245;  
Best Local Similarity 100.0%; Pred. No. 3e-121;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLWNIYDDLVKCVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLWNIYDDLVKCVKENS 120  
Qy 121 KDLKSKFSKSPRLPTPEEPFRIFNRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180  
Db 121 KDLKSKFSKSPRLPTPEEPFRIFNRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180  
Qy 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Db 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Qy 241 EFQEV 245  
Db 241 EFQEV 245

RESULT 3  
AAB98368  
ID AAB98368 standard; protein; 245 AA.  
XX  
AC AAB98368;  
XX  
DT 21-AUG-2001 (first entry)  
XX  
DE Human SCF protein sequence SEQ ID NO:63.  
XX  
KW Stem cell factor; SCF; stem cell factor receptor; blood cell disorder;  
KW gene therapy.  
XX  
OS Homo sapiens.  
XX  
FN US6207454-B1.  
XX  
PD 27-MAR-2001.  
XX  
PF 31-DEC-1998; 98US-00224681.  
XX

PR 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 25-NOV-1992; 92US-00982255.  
 PR 21-DEC-1993; 93US-00172329.  
 PR 24-MAY-1995; 95US-00049653.  
 PR 12-JAN-1998; 98US-00005893.  
 XX (AMGE-) AMGEN INC.  
 XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 PI WPI; 2001-366062/38.  
 XX DR N-PSDB; AAH41345.  
 XX Enhancing efficiency of transfer of polynucleotide into a target  
 PT mammalian cell in vitro, involves exposing cell that expresses a stem  
 PT cell factor receptor to stem cell factor, and introducing polynucleotide  
 PT into cell in vitro.  
 PS Claim 18; Fig 44; 210pp; English.  
 XX The present invention describes a method for enhancing (E) the efficiency  
 CC of transfer of a polynucleotide (I) into a target mammalian cell (II) in  
 CC vitro, comprising exposing (II) that expresses a stem cell factor (SCF)  
 CC receptor to a biologically active SCF, its analogue or fragment, which  
 CC induces cell proliferation, and introducing (I) to (II) in vitro.  
 CC Exposure of SCF to (II) results in increased uptake of (I) into the cell.  
 CC The method is useful for enhancing the efficiency of the transfer of a  
 CC polynucleotide into a target mammalian cell in vitro. The method is  
 CC useful in gene therapy techniques. AAH41301 to AAH41364 and AAB98351 to  
 CC AAB98390 represent sequences used in the exemplification of the present  
 CC invention  
 XX Sequence 245 AA;  
 SQ

Query Match 100.0%; Score 1262; DB 4; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;  
 Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIIVDDLVEVCVKNSS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIIVDDLVEVCVKNSS 120  
 QY 121 KDLKSKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180  
 DB 121 KDLKSKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180  
 QY 181 GDSSLHWAAMALPALFSLIIGAFGALYWKQRQPSLTRAVENTIINEEDNEISMLQEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIGAFGALYWKQRQPSLTRAVENTIINEEDNEISMLQEKER 240  
 QY 241 EFQEV 245  
 DB 241 EFQEV 245

RESULT 4  
 AAU02461  
 ID AAU02461 standard; protein; 245 AA.  
 XX AC  
 XX AAU02461;  
 XX DT 29-AUG-2001 (first entry)  
 XX DE Human SCF protein isolated from the 5637 bladder carcinoma cell line.  
 XX KW Human; stem cell factor; SCF; early haematopoietic progenitor cell;

KW blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;  
 KW anaemia; Kala azar; septicemia; malaria; hypopigmentation disorder;  
 XX 5637 bladder carcinoma.  
 OS Homo sapiens.  
 XX Key Location/Qualifiers  
 FH Protein 1..25  
 FT Protein /label= Signal\_peptide  
 FT Protein 26..245  
 FT Protein /label= Mature\_SCP  
 XX US6207417-B1.  
 XX 27-MAR-2001.  
 XX 07-JUN-1995; 95US-00482918.  
 XX 16-OCT-1989; 89US-00422383.  
 PR 11-JUN-1990; 90US-00537198.  
 PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 21-DEC-1993; 93US-00172329.  
 XX (ZSEB/) ZSEBO K M.  
 PA (BOSS/) BOSSELMAN R A.  
 PA (SUGG/) SUGGS S V.  
 PA (MART/) MARTIN F H.  
 XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 PI WPI; 2001-298941/31.  
 XX DR N-PSDB; AAS04125.  
 XX Novel nucleic acids encoding stem cell factor useful for treating  
 PT disorders involving blood cells, e.g. leukemia, splenomegaly, Hodgkin's  
 PT disease, Kala azar, anemia and septicemia.  
 XX Example 5; Fig 44A-44C; 209pp; English.  
 CC The present sequence representing human SCF (stem cell factor) protein is  
 CC isolated from the 5637 bladder carcinoma cell line. The present invention  
 CC relates to novel stem cell factors (AAU02453-AAU02458, AAU02460) and the  
 CC polynucleotides encoding them. SCF stimulate primitive progenitor cells  
 CC including early haematopoietic progenitor cells. The invention also  
 CC describes SCF peptides (AAU02462-AAU02481) and the oligonucleotides  
 CC (AAS04081-AA04117) used in the isolation of human and rat SCF sequences.  
 CC The polynucleotide encoding SCF is useful for producing SCF and useful in  
 CC gene therapy. It is useful for treating disorders involving blood cells  
 CC such as myelofibrosis, metastatic carcinoma, acute leukaemia, multiple  
 CC myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, anaemia,  
 CC congestive splenomegaly, Kala azar, sarcoidosis, military tuberculosis,  
 CC disseminated fungus disease, Fulminating septicemia, malaria, vitamin B12  
 CC and folic acid deficiency, pyridoxine deficiency, and hypopigmentation  
 CC disorders such as piebaldism and vitiligo  
 XX Sequence 245 AA;  
 SQ

Query Match 100.0%; Score 1262; DB 4; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;  
 Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIIVDDLVEVCVKNSS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIIVDDLVEVCVKNSS 120  
 QY 121 KDLKSKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180  
 DB 121 KDLKSKSPKSPRLPTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180

QY 181 GDSSLHWAAMALPALFSLIIIGFAGCALYWKQKQPSLTRAVENTIQINEEDNEISMLOEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIIGFAGCALYWKQKQPSLTRAVENTIQINEEDNEISMLOEKER 240  
 QY 241 EFQEV 245  
 DB 241 EFQEV 245  
 RESULT 5  
 ID AAB96953 standard; protein; 245 AA.  
 XX AAB96953;  
 XX 13-JUL-2001 (first entry)  
 XX Human stem cell factor SEQ ID NO: 63.  
 XX Human; rat; mammal; stem cell factor; SCF; cell growth stimulation;  
 KW gene therapy; haematopoietic disorder; aplastic anaemia; leukaemia;  
 KW neurological damage; intestinal damage; infertility; AIDS; SCID;  
 KW severe combined immunodeficiency.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Peptide 1..25  
 FT Protein /label= signal\_peptide  
 FT 26..245  
 FT /label= mature\_stem\_cell\_factor  
 XX  
 XX US6207802-B1.  
 XX 27-MAR-2001.  
 XX 09-NOV-1994; 94US-00336728.  
 XX 16-OCT-1989; 89US-00422383.  
 XX 11-JUN-1990; 90US-00537198.  
 XX 24-AUG-1990; 90US-00573616.  
 XX 01-OCT-1990; 90US-00589701.  
 XX 25-NOV-1992; 92US-00982255.  
 XX (AMGE-) AMGEN INC.  
 XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 XX WPI; 2001-353108/37.  
 XX N-PSDB; AAF89105.  
 XX Novel isolated non-human mammalian stem cell factor polypeptide  
 PT stimulating growth of early hematopoietic progenitor cells, useful for  
 PT treating aplastic anemia, lymphoma, Letterer-Siwe disease, Kala azar,  
 PT sarcoidosis.  
 XX  
 XX Example 5; Fig 44; 209pp; English.  
 XX  
 XX The present invention provides the protein and coding sequences of  
 CC mammalian stem cell factors (SCFs). These are capable of stimulating the  
 CC growth of early haematopoietic progenitor cells, neural stem cells and  
 CC primordial germ stem cells. The sequences are useful in the treatment of  
 CC leukaemias, haematopoietic disorders, aplastic anaemia, paroxysmal  
 CC nocturnal haemoglobinuria, malaria, pigmentation disorders, neurological  
 CC and intestinal damage, infertility, AIDS and severe combined  
 CC immunodeficiency (SCID). The present sequence is an SCF described in the  
 CC invention  
 XX  
 XX Sequence 245 AA;  
 Query Match 100.0%; Score 1262; DB 4; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;

Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 MKKTQTWILTCIYLQALLFNPVKTEGICRRNVNNVKDVTKLVANLPKDWITLKYPVG 60  
 DB 1 MKKTQTWILTCIYLQALLFNPVKTEGICRRNVNNVKDVTKLVANLPKDWITLKYPVG 60  
 QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISSEGLSNYSIIDKLNVIVDDLVEVCVKENSS 120  
 DB 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISSEGLSNYSIIDKLNVIVDDLVEVCVKENSS 120  
 QY 121 KDLKSKFSKPEPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180  
 DB 121 KDLKSKFSKPEPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180  
 QY 181 GDSSLHWAAMALPALFSLIIIGFAGCALYWKQKQPSLTRAVENTIQINEEDNEISMLOEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIIGFAGCALYWKQKQPSLTRAVENTIQINEEDNEISMLOEKER 240  
 QY 241 EFQEV 245  
 DB 241 EFQEV 245  
 RESULT 6  
 ID AAB73568 standard; protein; 245 AA.  
 XX AAB73568;  
 XX 07-AUG-2001 (first entry)  
 XX Human SCP protein isolated from the 5637 bladder carcinoma cell line.  
 XX Human; stem cell factor; SCF; early haematopoietic progenitor cell;  
 KW blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;  
 KW anaemia; Kala azar; septicaemia; malaria; hypopigmentation disorder;  
 KW 5637 bladder carcinoma.  
 XX  
 OS Homo sapiens.  
 XX  
 FH Key Location/Qualifiers  
 FT Protein 1..25  
 FT /label= Signal\_peptide  
 FT 26..245  
 FT /label= Mature\_SCF  
 XX  
 XX US6204363-B1.  
 XX 20-MAR-2001.  
 XX 25-NOV-1992; 92US-00982255.  
 XX 16-OCT-1989; 89US-00422383.  
 XX 11-JUN-1990; 90US-00537198.  
 XX 24-AUG-1990; 90US-00573616.  
 XX 01-OCT-1990; 90US-00589701.  
 XX 10-APR-1991; 91US-00684535.  
 XX (AMGE-) AMGEN INC.  
 XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 XX WPI; 2001-256683/26.  
 XX N-PSDB; AAH23902.  
 XX New stem cell factor polypeptides and their analogs which stimulate  
 PT growth of early hematopoietic progenitors, useful for treating aplastic  
 PT anemia, carcinoma, multiple myeloma, vitiligo, Kala azar, Hodgkin's  
 PT disease.  
 XX  
 XX Claim 10; Fig 44A-44C; 166pp; English.  
 XX The present sequence representing human SCF (stem cell factor) protein is

isolated from the 5637 bladder carcinoma cell line. The present invention relates to novel stem cell factors (AAB73561-AAB73568, AAB73571-AAB73576) and the polynucleotides encoding them. SCF stimulate primitive progenitor cells including early haematopoietic progenitor cells. The invention also describes SCF peptides (AAB73578-AAB73597) and the oligonucleotides (AAH23859-AAH23895) used in the isolation of human and rat SCF sequences. The polynucleotide encoding SCF is useful for producing SCF and useful in gene therapy. It is useful for treating disorders involving blood cells such as myelofibrosis, metastatic carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, anaemia, congestive splenomegaly, Kala azar, sarcoidosis, military tuberculosis, disseminated fungus disease, Fulminating septicemia, malaria, vitamin B12 and folic acid deficiency, pyridoxine deficiency, and hypopigmentation disorders such as piebaldism and vitiligo

Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 4; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;  
 Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWCWISVMVQVLSDSLTDLLDKFNSISEGLSNYSIIDKLVNIYDDLVKVCNKSS 120  
 DB 61 MDVLPSCWCWISVMVQVLSDSLTDLLDKFNSISEGLSNYSIIDKLVNIYDDLVKVCNKSS 120

QY 121 KDLKSKFSKSPPEPLTPTPEEPRIFNRSIDAPKDFVVASETSDCVVSTLSPEKGAKNPP 180  
 DB 121 KDLKSKFSKSPPEPLTPTPEEPRIFNRSIDAPKDFVVASETSDCVVSTLSPEKGAKNPP 180

QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNISMLQEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNISMLQEKER 240

QY 241 EFQEV 245  
 DB 241 EFQEV 245

# RESULT 7

AAU02767  
 ID AAU02767 standard; protein; 245 AA.

AC AAU02767;

DT 29-AUG-2001 (first entry)

DE Human SCF protein isolated from the 5637 bladder carcinoma cell line.

XX Human; stem cell factor; SCF; early haematopoietic progenitor cell;  
 KW blood disorder; leukaemia; Hodgkin's disease; lymphoma; splenomegaly;  
 KW anaemia; Kala azar; septicemia; malaria; hypopigmentation disorder;  
 KW 5637 bladder carcinoma.

OS Homo sapiens.

XX Key Location/Qualifiers  
 FH Protein 1..25  
 FT Protein /label= Signal\_peptide  
 FT Protein 26..245  
 FT Protein /label= Mature\_SCF

XX USG218148-B1.

XX 17-APR-2001.

XX 21-DEC-1993; 93US-00172329.

XX 16-OCT-1989; 89US-00422383.

PR 11-JUN-1990; 90US-00537198.

PR 24-AUG-1990; 90US-00573616.  
 PR 01-OCT-1990; 90US-00589701.  
 PR 25-NOV-1992; 92US-00982255.  
 XX (AMGE-) AMGEN INC.

PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
 XX WPI; 2001-281051/29.  
 DR N-PSDB; AAS04225.

PT Isolated DNA sequence, encoding polypeptide product useful for  
 XX stimulating growth of early hematopoietic progenitor cells.

PS Example 5; Fig 44A-44C; 167pp; English.

XX The present sequence representing human SCF (stem cell factor) protein is  
 CC isolated from the 5637 bladder carcinoma cell line. The present invention  
 CC relates to novel stem cell factors (AAU02761-AAU02767, AAU02770-AAU02775,  
 CC AAU02797) and the polynucleotides encoding them. SCF stimulate primitive  
 CC progenitor cells including early haematopoietic progenitor cells. The  
 CC invention also describes SCF peptides (AAU02777-AAU02794) and the  
 CC oligonucleotides (AAS04182-AAS04218) used in the isolation of human and  
 CC rat SCF sequences. The polynucleotide encoding SCF is useful for  
 CC producing SCF and useful in gene therapy. It is useful for treating  
 CC disorders involving blood cells such as myelofibrosis, metastatic  
 CC carcinoma, acute leukaemia, multiple myeloma, Hodgkin's disease,  
 CC lymphoma, Gaucher's disease, anaemia, congestive splenomegaly, Kala azar,  
 CC sarcoidosis, military tuberculosis, disseminated fungus disease,  
 CC Fulminating septicemia, malaria, vitamin B12 and folic acid deficiency,  
 CC pyridoxine deficiency, and hypopigmentation disorders such as piebaldism  
 CC and vitiligo

XX SQ Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 4; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;

Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWCWISVMVQVLSDSLTDLLDKFNSISEGLSNYSIIDKLVNIYDDLVKVCNKSS 120  
 DB 61 MDVLPSCWCWISVMVQVLSDSLTDLLDKFNSISEGLSNYSIIDKLVNIYDDLVKVCNKSS 120

QY 121 KDLKSKFSKSPPEPLTPTPEEPRIFNRSIDAPKDFVVASETSDCVVSTLSPEKGAKNPP 180  
 DB 121 KDLKSKFSKSPPEPLTPTPEEPRIFNRSIDAPKDFVVASETSDCVVSTLSPEKGAKNPP 180

QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNISMLQEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNISMLQEKER 240

QY 241 EFQEV 245  
 DB 241 EFQEV 245

# RESULT 8

AAU05267

ID AAU05267 standard; protein; 245 AA.

XX AAU05267;

XX 24-OCT-2001 (first entry)

XX Human SCF protein isolated from the 5637 bladder carcinoma cell line.

XX Human; stem cell factor; SCF; haematopoietic progenitor cell; AIDS;  
 KW blood disorder; Hodgkin's disease; vitamin B12; folic acid deficiency;  
 KW hypopigmentation disorder; viral disorder; 5637 bladder carcinoma.





CC haematopoietic progenitor cells with a gene, and transfer of a gene into  
 CC a mammal. They are useful for treating myelofibrosis, myeloid leukaemia,  
 CC osteopetrosis, metastatic carcinoma, acute leukaemia, multiple myeloma,  
 CC Hodgkin's disease, lymphoma, Gaucher's disease, Niemann-Pick disease,  
 CC Letterer-Siwe disease, refractory erythroblastic anaemia, Di Guglielmo  
 CC syndrome, congestive splenomegaly, Kala azar, sarcoidosis, primary  
 CC splenic pancytopenia, disseminated fungus disease, malaria, military  
 CC tuberculosis, fulminating septicaemia, pyridoxine deficiency, vitamin B12  
 CC and folic acid deficiency, Diamond Blackfan anaemia, hypopigmentation  
 CC disorders such as piebaldism, AIDS (acquired immune deficiency syndrome)  
 CC and vitiligo. The present sequence is human SCF protein

XX  
 XX Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 5; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;  
 Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQWTLTCYQLQLLFNPLVKTGICRNRVTNNVKDVTGLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQWTLTCYQLQLLFNPLVKTGICRNRVTNNVKDVTGLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLNVIVDDLVCEKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLNVIVDDLVCEKENS 120

QY 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKAKNPP 180  
 DB 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKAKNPP 180

QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNEISMLOEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNEISMLOEKER 240

QY 241 EFQEV 245  
 DB 241 EFQEV 245

RESULT 10

ABG95643

ID ABG95643 standard; protein; 245 AA.

XX AC ABG95643;

XX DT 05-DEC-2002 (first entry)

XX DE Human SCF protein from 5637 bladder carcinoma cell line.

XX Stem cell factor; SCF; blood-forming system; blood cell disorder;  
 KW haematopoietic system; metastatic carcinoma; acute leukaemia;  
 KW multiple myeloma; Hodgkin's disease; lymphoma; malaria; vitiligo;  
 KW refractory erythroblastic anaemia; military tuberculosis; cytostatic;  
 KW disseminated fungus disease; haematopoietic; tuberculous; antianemic;  
 KW antifungal; antimalarial; dermatological; human;  
 KW 5637 bladder carcinoma cell line.

XX OS Homo sapiens.

XX XX EP1241258-A2.

XX XX 18-SEP-2002.

XX XX 04-OCT-1990; 2002EP-00008587.

XX PR 16-OCT-1989; 89US-00422383.

XX PR 11-JUN-1990; 90US-00537198.

XX PR 24-AUG-1990; 90US-00573616.

XX PR 28-SEP-1990; 90WO-US005548.

XX PR 01-OCT-1990; 90US-00589701.

XX PR 04-OCT-1990; 90EP-00310899.

XX PR 04-OCT-1990; 95EP-00105391.

XX

PA (AMGE-) AMGEN INC.

XX Zsebo KM, Suggs SV, Bosselman RA, Martin FH;

XX WPI; 2002-684093/74.

XX N-PSDB; ABS73860.

XX Production of a human stem cell factor (SCF) polypeptide for treating  
 PT disorders involving blood cells, such as leukemia, comprises culturing  
 PT mammalian cells comprising non-human SCF promoter DNA linked to DNA  
 PT encoding the human SCF.

XX Example 18; Fig 44; 120pp; English.

XX The present invention relates to novel stem cell factors (SCFs),  
 CC polynucleotide sequences encoding the SCFs, and methods of producing  
 CC them. SCFs are involved in the blood-forming (haematopoietic) system in  
 CC mammals, particularly humans. The method of the invention is useful for  
 CC the production of human SCF. The stem cell factors are useful to treat  
 CC disorders involving blood cells e.g. metastatic carcinoma, acute  
 CC leukaemia, multiple myeloma, Hodgkin's disease, lymphoma, refractory  
 CC erythroblastic anaemia, military tuberculosis, disseminated fungus  
 CC disease, malaria, and vitiligo. The present sequence represents human SCF  
 CC protein isolated from the 5637 bladder carcinoma cell line

XX Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 5; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;  
 Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQWTLTCYQLQLLFNPLVKTGICRNRVTNNVKDVTGLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQWTLTCYQLQLLFNPLVKTGICRNRVTNNVKDVTGLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLNVIVDDLVCEKENS 120  
 DB 61 MDVLPSCWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLNVIVDDLVCEKENS 120

QY 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKAKNPP 180  
 DB 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKAKNPP 180

QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNEISMLOEKER 240  
 DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAVENTIINEEDNEISMLOEKER 240

QY 241 EFQEV 245

DB 241 EFQEV 245

RESULT 11

ABG52491

ID ABG52491 standard; protein; 245 AA.

XX AC ABG52491;

XX DT 29-JAN-2004 (first entry)

XX DE Human stem cell factor (SCF) polypeptide #6.

XX Human; stem cell factor; SCF; haematopoietic activity; infertility;  
 KW intestinal damage; myeloproliferative disorder; leucopenia;  
 KW thrombocytopenia; anaemia; bone marrow transplant; immune deficiency;  
 KW neoplasia; nerve damage; osteoporosis; metastatic carcinoma; leukaemia;  
 KW military tuberculosis; haematopoietic progenitor cell.

XX OS Homo sapiens.

XX XX US2002031491-A1.

XX XX 14-MAR-2002.

XX

```

XX PF 31-DEC-1998; 98US-00224683.
XX PR 16-OCT-1989; 89US-00422383.
XX PR 11-JUN-1990; 90US-00537198.
PR 24-AUG-1990; 90US-00573616.
XX PR 01-OCT-1990; 90US-00569701.
XX PR 10-APR-1991; 91US-00684535.
PR 25-NOV-1992; 92US-00982255.
XX PR 21-DEC-1993; 93US-00172329.
PR 24-MAY-1995; 95US-00449653.
XX PR 12-JAN-1998; 98US-00005893.
XX PA (ZSEB/) ZSEBO K M.
PA (BOSS/) BOSSELMAN R A.
XX PA (SUGG/) SUGGS S V.
XX PA (MART/) MARTIN F H.
XX PI Zsebo KM, Bosselman RA, Suggs SV, Martin FH;
XX XX
XX WPI; 2003-851459/79.
DR N-PSDB; ADE52490.
XX PT
XX PT New non-natural stem cell factor, useful for treating e.g. leucopenia or
XX PT immune deficiency, also related nucleic acid and antibodies.
XX PS Claim 9; SEQ ID NO 63; 217pp; English.
XX XX
XX CC The invention relates to stem cell factor (SCF) polypeptides with
XX CC haematopoietic activity and the polynucleotides encoding them. The
XX CC polypeptides are used for treating infertility, intestinal damage,
XX CC myeloproliferative disorders, leucopenia, thrombocytopenia or anaemia,
XX CC for improving engraftment of bone marrow transplants, for enhancing bone
XX CC marrow recovery after radiotherapy or chemotherapy and in treatment of
XX CC immune deficiency, neoplasia, nerve damage, osteoporosis, metastatic
XX CC carcinoma, leukaemia and miliary tuberculosis. The SCF polypeptides are
XX CC also used to expand haematopoietic progenitor cells for transplantation
XX CC and to prepare such cells for transfection with a gene. The SCF
XX CC polynucleotides can be used for recombinant expression of the
XX CC polypeptides and also as probes for mapping of the SCF gene, for
XX CC identifying SCF-related diseases and as a marker for neighbouring genes.
XX CC Antibodies raised against the polypeptides are useful in diagnosis and to
XX CC remove SCF from blood. This sequence represents an SCF polypeptide of the
XX CC invention.
XX SQ Sequence 245 AA;
Query Match 100.0%; Score 1262; DB 7; Length 245;
Best Local Similarity 100.0%; Pred. No. 3e-121;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MKKTQTWILTCIYLQALLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60
Db 1 MKKTQTWILTCIYLQALLFNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYVPG 60
QY 61 MDVLPSCWISBMVQLSDSLTDLKFSNISEGLSNYSIIDKLVNVDLVECVKENS 120
Db 61 MDVLPSCWISBMVQLSDSLTDLKFSNISEGLSNYSIIDKLVNVDLVECVKENS 120
QY 121 KDLKSKFSPEPLRTPPEFFRIFNRSIDAPKDFVVASSTSDCVVSSITLSPKGAKNPP 180
Db 121 KDLKSKFSPEPLRTPPEFFRIFNRSIDAPKDFVVASSTSDCVVSSITLSPKGAKNPP 180
QY 181 GDSLSLHWAAMALPALFSLIIGFAGALYWKQPSLITRAVENIQINEEDNEISMLQEKER 240
Db 181 GDSLSLHWAAMALPALFSLIIGFAGALYWKQPSLITRAVENIQINEEDNEISMLQEKER 240
QY 241 EFQEV 245
Db 241 EFQEV 245
< RESULT 12

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ADP99333
XX ID ADP99333 standard; protein; 245 AA.
XX AC ADP99333;
XX DT 23-SEP-2004 (first entry)
XX DE Human stem cell factor, SCF, protein (bladder cancer).
XX KW Human; SCF; stem cell factor; gene therapy;
KW haematopoietic progenitor cell; aplastic anaemia;
KW paroxysmal nocturnal haemoglobinuria; myelofibrosis; myelosclerosis;
KW osteopetrosis; metastatic carcinoma; acute leukaemia; multiple myeloma;
KW Hodgkin's disease; lymphoma; Gaucher's disease; Niemann-Pick disease;
KW Letterer-Siwe disease; refractory erythroblastic anaemia;
KW Di Guglielmo syndrome; congestive splenomegaly; Kala awar; sarcoidosis;
KW primary splenic pancytopenia; miliary tuberculosis;
KW disseminated fungus disease; Fulminating septicaemia; malaria;
KW vitamin B12 deficiency; folic acid deficiency; pyridoxine deficiency;
KW Diamond Blackfan anaemia; hypopigmentation disorder; piebaldism;
KW vitiligo; neurological damage; infertility; intestinal damage;
KW irradiation; chemotherapy; AIDS; haematopoietic recovery;
KW acute blood loss; neoplasm; cancer.
XX OS Homo sapiens.
XX FH
XX Key Location/Qualifiers
FT Peptide 1..25 /note= "Signal peptide"
FT Protein 26..245 /note= "Mature SCF"
XX XX
XX US6759215-B1.
XX 06-JUL-2004.
XX 07-AUG-2000; 2000US-00635251.
XX 16-OCT-1989; 89US-00422383.
XX 11-JUN-1990; 90US-00537198.
XX 24-AUG-1990; 90US-00573616.
XX 01-OCT-1990; 90US-00569701.
XX 10-APR-1991; 91US-00684535.
XX 25-NOV-1992; 92US-00982255.
XX 21-DEC-1993; 93US-00172329.
XX 24-MAY-1995; 95US-00449182.
XX (AMGE-) AMGEN INC.
XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;
XX WPI; 2004-497128/47.
XX N-PSDB; ADP99332.
XX PT Preparing a human stem cell factor (SCF) polypeptide, useful for treating
XX PT haematopoietic disorders, e.g., aplastic anemia, comprises growing host
XX PT cells transformed or transfected with DNA encoding a human SCF.
XX PS Claim 1; SEQ ID NO 63; 210pp; English.
XX XX
XX CC The invention relates to preparing a (vertebrate) human stem cell factor
XX CC (SCF) polypeptide comprising growing host cells transformed or
XX CC transfected with DNA encoding a human SCF that stimulates growth of
XX CC haematopoietic progenitor cells under nutrient conditions, the DNA being
XX CC operatively linked to an expression control sequence, and isolating the
XX CC polypeptide produced. Also included is a recombinant host cell
XX CC transformed or transfected with an expression construct comprising a
XX CC vertebrate SCF polypeptide-encoding DNA operatively linked to a
XX CC heterologous expression regulatory sequence, permitting the expression of
XX CC the vertebrate SCF polypeptide in the host cell. Disclosed as new are rat
XX CC and human nucleic acids encoding SCF, SCF proteins from a number of other
XX CC mammals and recombinantly expressed SCF protein fragments. The DNA
XX CC sequences are useful for effecting the large scale synthesis of SCF by a

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CC variety of recombinant techniques or for generating new and useful viral  
 CC and circular plasmid DNA vectors, new and useful transformed and  
 CC transfected prokaryotic and eukaryotic host cells, and new and useful  
 CC methods for cultured growth of such host cells capable of expression of  
 CC SCF and its related products. The DNA sequences are also useful as  
 CC labelled probes in isolating human genomic DNA encoding SCF, in methods  
 CC of protein synthesis, in genetic therapy in humans and other mammals, and  
 CC in developing transgenic mammalian species which may serve as eukaryotic  
 CC hosts for production of SCF and SCF products in quantity. The SCF is  
 CC useful for treating haematopoietic disorders, e.g., aplastic anaemia,  
 CC paroxysmal nocturnal haemoglobinuria, myelofibrosis, myelocleucosis,  
 CC osteopetrosis, metastatic carcinoma, acute leukaemia, multiple myeloma,  
 CC Hodgkin's disease, lymphoma, Gaucher's disease, Niemann-Pick disease,  
 CC Letterer-Siwe disease, refractory erythroblastic anaemia, Di Guglielmo  
 CC syndrome, congestive splenomegaly, Kala awar, sarcoidosis, primary  
 CC splenic pancytopenia, military tuberculosis, disseminated fungus disease,  
 CC Fulminating septicaemia, malaria, vitamin B 12 and folic acid deficiency,  
 CC pyridoxine deficiency, Diamond Blackfan anaemia, and hypopigmentation  
 CC disorders such as pibaldism and vitiligo. The SCF are also useful for  
 CC treating neurological damage, infertility states, intestinal damage  
 CC resulting from irradiation or chemotherapy, and AIDS. SCF is also useful  
 CC for enhancing haematopoietic recovery after acute blood loss and as a  
 CC boost to the immune system for fighting neoplasia (cancer). The present  
 CC sequence is a human SCF protein sequence (partial or full length).

XX Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 8; Length 245;  
 Best Local Similarity 100.0%; Pred. No. 3e-121;  
 Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
 Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

Qy 61 MDVLPFHCWISSEMVVQLSDSLTDLDFKFSNI SEGLSNYSIIDKLVNI VDDLVECVKENS 120  
 Db 61 MDVLPFHCWISSEMVVQLSDSLTDLDFKFSNI SEGLSNYSIIDKLVNI VDDLVECVKENS 120

Qy 121 KDLKKSFKSPPEPLPTPEEPFRIFNRSIDAFKDFVVASETSDCVSVSTLSPKKGAKNPP 180  
 Db 121 KDLKKSFKSPPEPLPTPEEPFRIFNRSIDAFKDFVVASETSDCVSVSTLSPKKGAKNPP 180

Qy 181 GDSSLHWAAMALPALFSLIIGFAGFALYWKQRQPSLTRAVENIQINEEDNEISMLOEKER 240  
 Db 181 GDSSLHWAAMALPALFSLIIGFAGFALYWKQRQPSLTRAVENIQINEEDNEISMLOEKER 240

Qy 241 EFQEV 245  
 Db 241 EFQEV 245

RESULT 13

AD888051  
 ID AD888051 standard; protein; 245 AA.

XX AC AD888051;

XX 18-NOV-2004 (first entry)

DE Tumour treatment-related human protein sequence SeqID87.

XX tumour inhibition; tumour treatment; metastasis; infectious lesion;  
 KW antigen presenting cell; immunostimulatory cytokine; cytostatic;  
 KW vulnery; immunomodulator; melanoma; hepatoma; adenocarcinoma;  
 KW colorectal cancer; basal cell cancer; oral cancer; nasopharyngeal cancer;  
 KW laryngeal cancer; bladder cancer; head cancer; neck cancer;  
 KW renal cell cancer; pancreatic cancer; pulmonary cancer; cervical cancer;  
 KW ovarian cancer; oesophageal cancer; gastric cancer; prostate cancer;  
 KW testicular cancer; breast cancer; human.

XX Homo sapiens.

XX

PN WO2004034995-A2.

XX 29-APR-2004.

XX 15-OCT-2003; 2003WO-US032827.

XX 15-OCT-2002; 2002US-0418865P.

XX (UYPI-) UNIV PITTSBURGH.

PI Lotze MT, Tahara H;

DR WPI; 2004-365083/34.

DR N-PSDB; ADS88050.

XX Inhibiting or treating a tumor, metastasis or infectious lesion comprises  
 PT administering into or near site of a tumor or infectious lesion an  
 PT antigen presenting cell and an immunostimulatory cytokine or a nucleic  
 PT acid encoding the cytokine.

XX Disclosure; SEQ ID NO 87; 169pp; English.

XX This invention relates to a novel method of inhibiting or treating a  
 CC tumour, metastasis or infectious lesion in a subject which comprises  
 CC administering into or near a site of a tumour or infectious lesion in a  
 CC subject an antigen presenting cell and an immunostimulatory cytokine or a  
 CC nucleic acid encoding the cytokine. The invention may be useful for the  
 CC production of compounds with a cytostatic or vulnery activity acting as  
 CC immunomodulators. The method is useful in inhibiting or treating a  
 CC tumour, metastasis or infectious lesion in a subject, where the size of  
 CC the tumour, metastasis (where number is also decreased) or infectious  
 CC lesion is decreased. The tumour is selected from melanoma, hepatoma,  
 CC adenocarcinoma, colorectal cancer, basal cell cancer, oral cancer,  
 CC nasopharyngeal cancer, laryngeal cancer, bladder cancer, head and neck  
 CC cancer, renal cell cancer, pancreatic cancer, pulmonary cancer, cervical  
 CC cancer, ovarian cancer, oesophageal cancer, gastric cancer, prostate  
 CC cancer, testicular cancer and breast cancer. The present sequence is that  
 CC of a protein which is related to the invention.

XX Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 8; Length 245;

Best Local Similarity 100.0%; Pred. No. 3e-121;

Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

Qy 61 MDVLPFHCWISSEMVVQLSDSLTDLDFKFSNI SEGLSNYSIIDKLVNI VDDLVECVKENS 120

Db 61 MDVLPFHCWISSEMVVQLSDSLTDLDFKFSNI SEGLSNYSIIDKLVNI VDDLVECVKENS 120

Qy 121 KDLKKSFKSPPEPLPTPEEPFRIFNRSIDAFKDFVVASETSDCVSVSTLSPKKGAKNPP 180

Db 121 KDLKKSFKSPPEPLPTPEEPFRIFNRSIDAFKDFVVASETSDCVSVSTLSPKKGAKNPP 180

Qy 181 GDSSLHWAAMALPALFSLIIGFAGFALYWKQRQPSLTRAVENIQINEEDNEISMLOEKER 240

Db 181 GDSSLHWAAMALPALFSLIIGFAGFALYWKQRQPSLTRAVENIQINEEDNEISMLOEKER 240

Qy 241 EFQEV 245

Db 241 EFQEV 245

RESULT 14

ADU50663

ID ADU50663 standard; protein; 245 AA.

XX AC ADU50663;

XX 13-JAN-2005 (first entry)

XX

XX Human SCF cDNA from 5637 bladder carcinoma cell line, protein.  
XX  
XX Human, stem cell factor; SCF; haematopoietic;  
KW HT1080 fibrosarcoma cell line; 5637 bladder carcinoma cell line;  
KW leukopaemia; thrombocytopaenia; anaemia; bone marrow during transplant;  
KW bone marrow aplasia; myelosuppression; immune deficiency; neoplasm;  
KW nerve damage; infertility; intestinal damage;  
KW myeloproliferative disorder; early haematopoietic progenitor cell;  
KW haematopoietic disorders; aplastic anaemia; myelofibrosis;  
KW myelocytosis; osteopetrosis; metastatic carcinoma; multiple myeloma;  
KW Hodgkin's disease; lymphoma; Gaucher's disease; Niemann-Pick disease;  
KW Diamond-Blackfan anaemia; DBA; Fanconi's anaemia; gene therapy;  
KW acute blood loss.  
XX  
OS Homo sapiens.  
XX  
XX US2004181044-A1.  
XX  
XX 16-SEP-2004.  
XX  
XX 19-JUN-2002; 2002US-00175608.  
XX  
XX 16-OCT-1989; 89US-00422383.  
XX 11-JUN-1990; 90US-00537198.  
XX 24-AUG-1990; 90US-00573616.  
XX 01-OCT-1990; 90US-00589701.  
XX 10-APR-1991; 91US-00684535.  
XX 25-NOV-1992; 92US-00982255.  
XX 21-DEC-1993; 93US-00172329.  
XX 07-JUN-1995; 95US-00486546.  
XX 07-AUG-2000; 2000US-00635249.  
XX  
XX (ZSEB/) ZSEBO K M.  
XX (BOSS/) BOSSELMAN R A.  
XX (SUGG/) SUGGS S V.  
XX (MART/) MARTIN F H.  
XX  
XX Zsebo KM, Bosseلمان RA, Suggs SV, Martin FH;  
XX WPI; 2004-707481/69.  
XX N-PSDB; ADU50662.  
XX  
XX Novel stem cell factor (SCF) such as non-naturally-occurring SCF or  
XX naturally occurring SCF, useful for treating leukopenia,  
XX thrombocytopenia, anemia, and enhancing engraftment of bone marrow during  
XX transplantation.  
XX  
XX Claim 9; SEQ ID NO 63; 216pp; English.  
XX  
XX The invention relates to a stem cell factor (SCF) such as non-naturally-  
XX occurring SCF having an amino acid sequence sufficiently duplicative of  
XX that of naturally occurring SCF to allow possession of a haematopoietic  
XX biological activity of naturally occurring stem cell factor, or naturally  
XX occurring SCF. Also included are an isolated DNA sequence for use in  
XX securing expression in a prokaryotic or eukaryotic host cell of non-  
XX naturally occurring SCF, a prokaryotic or eukaryotic host cell  
XX transformed or transfected with the DNA, a polypeptide product of the  
XX expression of the DNA in a prokaryotic or eukaryotic host cell, an  
XX isolated DNA sequence coding for prokaryotic or eukaryotic host  
XX expression of non-naturally occurring SCF, a DNA sequence coding for a  
XX polypeptide fragment or polypeptide analogue of naturally-occurring stem  
XX cell factor, a biologically functional plasmid or viral DNA vector  
XX including the DNA sequence above, a prokaryotic or eukaryotic host cell  
XX stably transformed or transfected with the DNA, a polypeptide having part  
XX or all of amino acid sequence encoded by composite nucleic acid sequence  
XX of human SCF cDNA, human SCF cDNA sequence obtained from HT1080  
XX fibrosarcoma cell line, or human SCF cDNA obtained from 5637 bladder  
XX carcinoma cell line (and having one or more of in vitro biological  
XX activity of naturally-occurring stem cell factor, and an antibody (Ab)  
XX specifically binding SCF. SCF is useful for treating leukopaemia,  
XX thrombocytopaenia, anaemia, and enhancing engraftment of bone marrow  
XX during transplantation in a mammal. SCF is useful enhancing bone marrow

CC recovery in treatment of radiation, chemical, or chemotherapeutic induced  
CC bone marrow aplasia or myelosuppression which involves treating patients  
CC with therapeutically effective doses of SCF. SCF is useful for treating  
CC acquired immune deficiency, neoplasia, nerve damage, infertility,  
CC intestinal damage, and a myeloproliferative disorder. SCF is useful for  
CC transfecting early haematopoietic progenitor cells with a gene which  
CC involves culturing early haematopoietic progenitor cells with SCF, and  
CC transfecting the cultured cells with a gene. SCF is useful for  
CC transfecting a gene to a mammal which involves culturing early  
CC haematopoietic progenitor cells with SCF, transfecting the cultured cells  
CC with a gene, and administering the cultured cell to the mammal. SCF is  
CC useful for treating various haematopoietic disorders, aplastic anaemia,  
CC myelofibrosis, myelocytosis, osteopetrosis, metastatic carcinoma, acute  
CC leukaemia, multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's  
CC disease, Niemann-Pick disease, Diamond-Blackfan anaemia (DBA), Fanconi's  
CC anaemia. SCF is useful for enhancing the efficiency of gene therapy, for  
CC enhancing haematopoietic recovery after acute blood loss. The present  
CC sequence is a human SCF protein sequence.  
XX  
XX SQ Sequence 245 AA;

Query Match 100.0%; Score 1262; DB 8; Length 245;  
Best Local Similarity 100.0%; Pred. NO. 3e-121;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWILTCIYLQALLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWILTCIYLQALLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWCISEMVVQSDSLTDLDPKFSNISSEGLSNYSIIDKLVINIVDDIVECVKENS 120  
DB 61 MDVLPSCWCISEMVVQSDSLTDLDPKFSNISSEGLSNYSIIDKLVINIVDDIVECVKENS 120  
QY 121 KDLKSKFSKPEPRLTPEEPRIENRSDAPKDFVASETSDCVVSTLSPEKGAKNPP 180  
DB 121 KDLKSKFSKPEPRLTPEEPRIENRSDAPKDFVASETSDCVVSTLSPEKGAKNPP 180  
QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQINEDNEISMLOEKER 240  
DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQINEDNEISMLOEKER 240  
QY 241 EFQEV 245  
DB 241 EFQEV 245

RESULT 15  
ADW93108  
ID ADW93108 standard; protein; 245 AA.  
XX  
XX AC ADW93108;  
XX  
XX DT 21-APR-2005 (first entry)  
XX  
XX DE Human Stem Cell Factor, SEQ ID 63.  
XX  
XX KW Antianemic; Antiemetic; Cytostatic; Anti-HIV; Cardiovascular-Gen.;  
KW CNS-Gen.; Antiparasitic; Antibacterial; Immunosuppressive;  
KW Antiinflammatory; Fungicide; Antifertility; AIDS; aplastic anemia;  
KW paroxysmal nocturnal hemoglobinuria; osteopetrosis; acute leukemia;  
KW multiple myeloma; hodgkins disease; lymphoma; gauchers disease;  
KW niemann pick disease; sarcoidosis; plasmodium infection;  
KW vitamin deficiency; hypopigmentation; vitiligo; infertility;  
KW chronic myelocytic leukemia; cell proliferation; Stem Cell factor.  
XX  
XX OS Homo sapiens.  
XX  
XX FH Key Location/Qualifiers  
XX FT Peptide 1..25  
XX FT Protein /label= Signal\_peptide  
XX 26..245  
XX /label= Mature\_protein  
XX

PN US6852313-B1.  
XX  
PD 08-FEB-2005.  
XX  
XX 26-JUN-2000; 2000US-00604325.  
XX  
PR 16-OCT-1989; 89US-00422383.  
PR 11-JUN-1990; 90US-00537198.  
PR 24-AUG-1990; 90US-00573616.  
PR 01-OCT-1990; 90US-00589701.  
PR 10-OCT-1990; 90US-00589701.  
PR 10-APR-1991; 91US-00684535.  
PR 25-NOV-1992; 92US-00982255.  
PR 21-DEC-1993; 93US-00172329.  
PR 24-MAY-1995; 95US-00449649.  
XX  
PA (AMGE-) AMGEN INC.  
XX  
XX Zsebo KM, Bosselman RA, Suggs SV, Martin FH;  
XX  
XX WPI; 2005-160562/17.  
DR N-PSDB; ADM93107.  
XX  
XX Stimulating proliferation of melanocyte cells in human, involves  
PT administering stem cell factor polypeptide or its biologically active  
PT fragments stimulating growth of melanocyte cells, and optionally carrier,  
PT to human.  
XX  
XX Claim 4; SEQ ID NO 63; 212pp; English.  
XX  
XX The present invention relates to a method (M1) for stimulating  
CC proliferation of melanocyte cells in a human. (M1) involves administering  
CC a Stem Cell Factor (SCF) protein, or its biologically active fragments  
CC that stimulates growth of melanocyte cells, and optionally a carrier, to  
CC the human. The SCF is covalently conjugated to a water soluble polymer  
CC e.g. polyethylene glycol. Also, the SCF is co-administered with one or  
CC more other cytokines. SCF is also able to stimulate the growth of  
CC primitive progenitors such as early hematopoietic progenitor cells that  
CC are capable of maturing to erythroid, megakaryocyte, granulocyte,  
CC lymphocyte and macrophage cells, and non-hematopoietic stem cells such as  
CC neural stem cells and primordial germ stem cells. (M1) is useful in  
CC accelerating bone marrow regeneration, and in augmenting T cell  
CC production. (M1) is useful for treating stem cells disorders that are  
CC characterized by a reduction in functional marrow mass due to toxic,  
CC radiant or immunological injury. (M1) is useful in treating AIDS,  
CC aplastic anemia, paroxysmal nocturnal hemoglobinuria, myelofibrosis,  
CC myelosclerosis, osteopetrosis, metastatic carcinoma, acute leukemia,  
CC multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, Niemann  
CC -Pick disease, congestive splenomegaly, Kalaazar, sarcoidosis, primary  
CC splenic pancytopenia, disseminated fungus disease, fulminating  
CC septicemia, malaria, vitamin B12 and folic acid deficiency disease,  
CC pyridoxine deficiency disease, and hypopigmentation disorders such as  
CC piebaldism and vitiligo. (M1) is useful in treating infertility states,  
CC intestinal damage resulting from irradiation or chemotherapy, and stem  
CC cell myeloproliferative disorders such as chronic myelogenous leukemia,  
CC primary thrombocythemia and acute leukemia. (M1) is useful in expanding  
CC early hematopoietic progenitors in syngeneic, allogeneic or autologous  
CC bone marrow transplantation, and in enhancing the efficacy of gene  
CC therapy. The present sequence was used to illustrate the invention. The  
CC coding sequence for this protein was obtained from the 5637 bladder  
CC carcinoma cell line.  
XX  
XX Sequence 245 AA;

Search completed: February 22, 2006, 18:13:01  
Job time : 145.098 secs

Query Match 100.0%; Score 1262; DB 9; Length 245;  
Best Local Similarity 100.0%; Pred. No. 3e-121;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
XX 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPG 60  
XX  
XX 61 MDVLPCHWISMMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIVDDLVCEVKENSS 120  
XX  
XX

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GenCore version 5.1.7  
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OM protein - protein search, using sw model

Run on: February 22, 2006, 18:13:23 ; Search time 20.2479 Seconds  
(without alignments)  
1164.223 Million cell updates/sec

Title: US-10-620-642-63

Perfect score: 1262

Sequence: 1 MKKTQWTLTCIYLQLLFN.....NEEDNEISMLQEKREFOEV 245

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80.\*

1: pir1.\*

2: pir2.\*

3: pir3.\*

4: pir4.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1262	100.0	245	2 B61190	mast cell growth f
2	1231	97.5	273	2 A35974	mast cell growth f
3	1037.5	82.2	274	2 I46575	c-kit ligand - pig
4	1022	81.0	245	2 A37934	mast cell growth f
5	1018.5	80.7	274	2 S47571	stem cell factor,
6	1014.5	80.4	274	2 I46929	stem cell factor -
7	991	78.5	273	2 S65801	mast cell growth f
8	749.5	59.4	202	2 S58313	stem cell factor p
9	721	57.1	201	2 B35974	stem cell factor p
10	605	47.9	253	2 S70367	stem cell factor s
11	584	46.3	287	2 JN0637	stem cell factor p
12	583	46.2	287	2 S70366	stem cell factor p
13	491.5	38.9	124	2 S29052	stem cell factor -
14	175.5	13.9	51	2 B35971	mast cell growth f
15	172.5	13.7	49	2 A35971	mast cell growth f
16	97.5	7.7	402	2 T09062	probable advanced
17	97	7.7	482	2 S37845	transcription init
18	97	7.7	1447	2 F82909	hypothetical prote
19	93.5	7.4	647	2 F90595	conserved hypothet
20	93.5	7.4	3227	2 T37964	probable ubiquitin
21	92.5	7.3	512	2 G86773	citrate (pro-3S)-1
22	92.5	7.3	534	2 T23425	hypothetical prote
23	92	7.3	420	2 E90553	hypothetical prote
24	92	7.3	821	2 AD1507	probable secreted
25	92	7.3	1174	1 HJBYDH	helicase (EC 3.6.1
26	91.5	7.3	295	2 AC2939	hypothetical prote
27	91.5	7.3	309	2 D98343	lactose transport
28	91.5	7.3	1993	2 T30902	sodium channel SCA
29	91	7.2	378	2 F64300	formate dehydrogen

## RESULT 1

B61190

mast cell growth factor, short form precursor - human

N:Alternate names: kit ligand, short form; stem cell factor, short form

C:Species: Homo sapiens (man)

C:Date: 03-May-1994 #sequence\_revision 03-May-1994 #text\_change 09-Jul-2004

C:Accession: B61190

R:Anderson, D.M.; Williams, D.E.; Tushinski, R.; Gimpel, S.; Cannizzaro, J.

Cell Growth Differ. 2, 373-378, 1991

A:Title: Alternate splicing of mRNAs encoding human mast cell growth factor and localized

A:Reference number: A61190; MUID:92172791; PMID:1724381

A:Accession: B61190

A:Status: nucleic acid sequence not shown; not compared with conceptual translation

A:Molecule type: mRNA

A:Residues: 1-245 <AND>

A:Cross-references: UNIPROT:P21583; UNIPARC:UPI000002B351

C:Comment: Alternative splicing produces this short form in which a predicted cleavage

C:Genetics:

A:Gene: GDB:M6F

A:Cross-references: GDB:128026; OMIM:184745

A:Map position: 12q22-12q22

C:Superfamily: mouse mast cell growth factor

C:Keywords: alternative splicing; glycoprotein; transmembrane protein

F:1-25/Domain: signal sequence #status predicted <SIG>

F:187-209/Domain: transmembrane #status predicted <TMN>

F:90,97,118,145/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 100.0%; Score 1262; DB 2; Length 245;

Best Local Similarity 100.0%; Pred. No. 4.8e-94;

Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQWTLTCIYLQLLFNPLVKTEGICRRRTNNVNDVKLVANLPKDYMITLKYVPG 60

Db 1 MKKTQWTLTCIYLQLLFNPLVKTEGICRRRTNNVNDVKLVANLPKDYMITLKYVPG 60

Qy 61 MDVLPSCHWISEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNI VDDDLVECVKENS 120

Db 61 MDVLPSCHWISEMVVQLSDSLTDLDDKFSNISEGLSNYSIIDKLVNI VDDDLVECVKENS 120

Qy 121 KDLKKSPKSPPLPTPEEPFRINRSIDAKDFVASETSDCVVSSSTLSPEKGAKNPP 180

Db 121 KDLKKSPKSPPLPTPEEPFRINRSIDAKDFVASETSDCVVSSSTLSPEKGAKNPP 180

Qy 181 GDSSLSHWAAMALPALFSLITGFACALYWKCRQSLTRAVENIQINEDNEISMLQEKER 240

Db 181 GDSSLSHWAAMALPALFSLITGFACALYWKCRQSLTRAVENIQINEDNEISMLQEKER 240

Qy 241 EFQEV 245

Db 241 EFQEV 245

## RESULT 2

A35974  
A:Status: preliminary; translated from human  
N:Alternate names: kit ligand; stem cell factor  
C:Species: Homo sapiens (man)  
C:Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004  
C:Accession: A35974; A61190  
R:Martin, F.H.; Suggs, S.V.; Langley, K.E.; Lu, H.S.; Ting, J.; Okino, K.H.; Morris, C.F.  
S, J.C.; Patel, A.C.; Fisher, E.F.; Erjavec, H.O.; Herrera, C.J.; Wypych, J.; Sachdev, R.  
Cell 63, 203-211, 1990  
A:Title: Primary structure and functional expression of rat and human stem cell factor  
A:Reference number: A35974; MUID:91004219; PMID:2208279  
A:Accession: A35974  
A:Molecule type: mRNA  
A:Residues: 1-273 <M>  
A:Cross-references: UNIPROT:P21583; UNIPARC:UPI000002D482; GB:M59964; NID:G337933; PIDN:  
R:Anderson, D.M.; Williams, D.E.; Tushinski, R.; Gimpel, S.; Eisenman, J.; Cannizzaro, I.  
Cell Growth Differ. 2, 373-378, 1991  
A:Title: Alternate splicing of mRNAs encoding human mast cell growth factor and localized  
A:Reference number: A61190; MUID:92172791; PMID:1724381  
A:Accession: A61190  
A:Status: nucleic acid sequence not shown; not compared with conceptual translation  
A:Molecule type: mRNA  
A:Residues: 1-273 <AND>  
A:Cross-references: UNIPARC:UPI000002D482  
C:Genetics:  
A:Gene: GDB:MGP  
A:Cross-references: GDB:128026; OMIM:194745  
A:Map position: 12q22-12q22  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: alternative splicing; extracellular protein; glycoprotein; transmembrane pro  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-273/Product: mast cell growth factor #status predicted <MCS>  
F:26-189/Product: (or 26-190) mast cell growth factor, soluble form #status predicted <M  
F:215-237/Domain: transmembrane #status predicted <TM>  
F:90,97,118,145,195/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 97.5%; Score 1231; DB 2; Length 273;  
Best Local Similarity 89.4%; Pred. No. 1.7e-91;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
QY 1 MKKTQTWLTCTIYQLLLFNLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKFSKSPRLFTPEPRIFNRSIDAFKDFVVASETSDCVVSTLSPEKG----- 174  
DB 121 KDLKSKFSKSPRLFTPEPRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPPGDSSLHWAAMALPALFSLIIGFAGALYWK 212  
DB 181 KPFMLPPVAASLRNDSSSNRKAASDIEDSSLQWAAVALPAFSLVIGFAGALYWK 240  
QY 213 QPSLTRAVENTIQUEDNEISMLOEKEREFQEV 245  
DB 241 QPSLTRAVENTIQUEDNEISMLOEKEREFQEV 273

## RESULT 3

I46575  
c-kit ligand - pig  
C:Species: Sus scrofa domestica (domestic pig)  
C:Date: 21-Feb-1997 #sequence\_revision 21-Feb-1997 #text\_change 09-Jul-2004  
C:Accession: I46575  
R:Zhang, Z.; Anthony, R.V.  
Biol. Reprod. 50, 95-102, 1994  
A:Title: Porcine stem cell factor/c-kit ligand: its molecular cloning and localization  
A:Reference number: I46575; MUID:94146218; PMID:7508758  
A:Accession: I46575

A:Status: preliminary; translated from GB/EMBL/DBDJB  
A:Molecule type: mRNA  
A:Residues: 1-274 <ZHA>  
A:Cross-references: UNIPROT:Q29030; UNIPARC:UPI0000135640; GB:L07786; NID:gl64420; PIDN:  
C:Superfamily: mouse mast cell growth factor

Query Match 82.2%; Score 1037.5; DB 2; Length 274;  
Best Local Similarity 75.2%; Pred. No. 5.9e-76;  
Matches 206; Conservative 22; Mismatches 17; Indels 29; Gaps 2;  
QY 1 MKKTQTWLTCTIYQLLLFNLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKFSKSPRLFTPEPRIFNRSIDAFKDFVVASETSDCVVSTLSPEKG----- 174  
DB 121 KDLKSKFSKSPRLFTPEPRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSV 180  
QY 175 -----KAKNPPGDSSLHWAAMALPALFSLIIGFAGALYWK 211  
DB 181 KPFMLPPVAASLRNDSSSNRKAASDIEDSSLQWAAVALPAFSLVIGFAGALYWK 240  
QY 212 QPSLTRAVENTIQUEDNEISMLOEKEREFQEV 245  
DB 241 KOPNLTRTVENTIQUEDNEISMLOEKEREFQEV 274

## RESULT 4

A37934  
A:Status: preliminary; translated from GB/EMBL/DBDJB  
N:Alternate names: KL-2 protein  
C:Species: Mus musculus (house mouse)  
C:Date: 26-Jul-1991 #sequence\_revision 26-Jul-1991 #text\_change 09-Jul-2004  
C:Accession: A37934; B43751  
R:Flanagan, J.G.; Chan, D.C.; Leder, P.  
Cell 64, 1025-1035, 1991  
A:Title: Transmembrane form of the kit ligand growth factor is determined by alternative  
A:Reference number: A37934; MUID:91160046; PMID:1705866  
A:Accession: A37934  
A:Molecule type: mRNA  
A:Residues: 1-245 <FLA>  
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI000002B352; GB:M64262  
R:Huang, E.J.; Nocka, K.H.; Buck, J.; Besmer, P.  
Mol. Biol. Cell 3, 349-362, 1992  
A:Title: Differential expression and processing of two cell associated forms of the kit-  
A:Reference number: A43751; MUID:92330001; PMID:1378327  
A:Accession: B43751  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-173, 'R', 175-186, 'L', 188-245 <HUA>  
A:Cross-references: UNIPARC:UPI0000179560; GB:S04534  
A:Note: the authors translated the codon TTG for residue 187 as Trp  
C:Superfamily: mouse mast cell growth factor

Query Match 81.0%; Score 1022; DB 2; Length 245;  
Best Local Similarity 80.8%; Pred. No. 9.1e-75;  
Matches 198; Conservative 19; Mismatches 28; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTCTIYQLLLFNLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNLVKTGICRNRVTNNKDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKFSKSPRLFTPEPRIFNRSIDAFKDFVVASETSDCVVSTLSPEKGAKNPP 180  
DB 121 KNKESPKRSPRFTPEPRIFNRSIDAFKDFVVASETSDCVVSTLSPEKGAKNAP 180



QY 181 GDSLHWAAMALPALPSLIIGFAPGALYWKQPSLTRAVENTIQTNEEDNEISMLQEKER 240  
DB 181 EDSGLQWTAMALPALISLVIGFAPGALYWKQSSLTRAVENTIQTNEEDNEISMLQEKER 240  
QY 241 EFQEV 245  
DB 241 EFQEV 245

RESULT 5  
S47571  
stem cell factor, longer isoform - bovine  
C:Species: Bos primigenius taurus (cattle)  
C>Date: 27-Jan-1995 #sequence\_revision 27-Jan-1995 #text\_change 09-Jul-2004  
C:Accession: S47571  
R:Zhou, J.H.; Hikono, H.; Ohtaki, M.; Kubota, T.; Sakurai, M.  
Biochim. Biophys. Acta 1223, 148-150, 1994  
A:Title: Cloning and characterization of cDNAs encoding two normal isoforms of bovine stem cell factor  
A:Reference number: S47571; MUID:94339176; PMID:7520283  
A:Accession: S47571  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-274 <ZHO>  
A:Cross-references: UNIPROT:Q28132; UNIPARC:UPI0000135639; EMBL:D28934; NID:G538520; PID:146929  
C:Superfamily: mouse mast cell growth factor

Query Match 80.7%; Score 1018.5; DB 2; Length 274;  
Best Local Similarity 74.1%; Pred. No. 28-74; Mismatches 20; Indels 29; Gaps 2;  
Matches 203; Conservative 20; Mismatches 22; Indels 29; Gaps 2;

QY 1 MKKTQTWILTCIYLQALLFNPVKTEGICRNRVTNNKDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWITTCIYLQALLFNPVKTKGICGKRVTDVTKLVANLPKDYKIALKYPVG 60  
QY 61 MDVLPSCWCWISVMVQSLSDTLDDKFSNISEGLSNYSIIIDKLVNIVDDLVCECKENSS 120  
DB 61 MDVLPSCWCWISVMVQSLSVSLTDLDDKFSNISEGLSNYSIIIDKLVNIVDDLVCECKENSS 120  
QY 121 KDLKSKFSKSPRLTPPEFFRIFNRSIDAFKDF-VVASSETSDCVVSSSTLSPEKG---- 174  
DB 121 ENVKKSKSPRLTPPEFFRIFNRSIDAFKDFKLETFVASKSECVVSSSTLSPEKDSRVSV 180  
QY 175 -----KAKNPPGDSLSLHWAAMALPALPSLIIGFAPGALYWK 211  
DB 181 TKPFMLPPVAASSLRNDSSSNRKASNSIGDSNLQWAAVALPAFFSLVIGFAPGALYWK 240  
QY 212 ROPSLTRAVENTIQTNEEDNEISMLQEKERFOEV 245  
DB 241 KOPNLTRTVENNIQTNEEDNEISMLQEKERFOEV 274

RESULT 6  
I46929  
stem cell factor - dog  
C:Species: Canis lupus familiaris (dog)  
C>Date: 04-Sep-1997 #sequence\_revision 04-Sep-1997 #text\_change 09-Jul-2004  
C:Accession: I46929  
R:Shull, R.M.; Suggs, S.V.; Langley, K.E.; Okino, K.H.; Jacobsen, F.W.; Martin, F.H.  
Exp. Hematol. 20, 1118-1124, 1992  
A:Title: Canine stem cell factor (c-kit ligand) supports the survival of hematopoietic B cells  
A:Reference number: I46929; MUID:93106145; PMID:1281786  
A:Accession: I46929  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-274 <SHU>  
A:Cross-references: UNIPROT:Q06220; UNIPARC:UPI000013563A; GB:S53329; NID:G262240; PID:146929  
C:Superfamily: mouse mast cell growth factor

Query Match 80.4%; Score 1014.5; DB 2; Length 274;  
Best Local Similarity 74.8%; Pred. No. 4-28-74; Mismatches 17; Indels 29; Gaps 2;  
Matches 205; Conservative 17; Mismatches 23; Indels 29; Gaps 2;

QY 1 MKKTQTWILTCIYLQALLFNPVKTEGICRNRVTNNKDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWITTCIYLQALLFNPVKTKGICGKRVTDVTKLVANLPKDYKIALKYPVG 60  
QY 61 MDVLPSCWCWISVMVQSLSDTLDDKFSNISEGLSNYSIIIDKLVNIVDDLVCECKENSS 120  
DB 61 MDVLPSCWCWISVMVQSLSVSLTDLDDKFSNISEGLSNYSIIIDKLVNIVDDLVCECKENSS 120  
QY 121 KDLKSKFSKSPRLTPPEFFRIFNRSIDAFKDF-VVASSETSDCVVSSSTLSPEKG---- 174  
DB 121 ENVKKSKSPRLTPPEFFRIFNRSIDAFKDFKLETFVASKSECVVSSSTLSPEKDSRVSV 180  
QY 175 -----KAKNPPGDSLSLHWAAMALPALPSLIIGFAPGALYWK 211  
DB 181 TKPFMLPPVAASSLRNDSSSNRKASNSIGDSNLQWAAVALPAFFSLVIGFAPGALYWK 240  
QY 212 ROPSLTRAVENTIQTNEEDNEISMLQEKERFOEV 245  
DB 241 KOPNLTRTVENNIQTNEEDNEISMLQEKERFOEV 274

RESULT 7  
S65801  
mast cell growth factor - mouse  
N:Alternate names: hematopoietic growth factor KL; ligand steel factor; stem cell factor.  
C:Species: Mus musculus (house mouse)  
C>Date: 28-Oct-1996 #sequence\_revision 27-Feb-1997 #text\_change 09-Jul-2004  
A:Accession: S65801; A43751; A35976; A35977; A35972; A35975; A35973; I48768  
R:Bedell, M.A.; Copeland, N.G.; Jenkins, N.A.  
Genetics 142, 927-934, 1996  
A:Title: Multiple pathways for Steel regulation suggested by genomic and sequence analysis  
A:Reference number: S65801; MUID:97002551; PMID:8849898  
A:Accession: S65801  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-273 <BED>  
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI0000028C9B; EMBL:U44725; NID:G1172215; P:146929  
R:Huang, E.J.; Nocka, K.H.; Buck, J.; Besmer, P.  
Mol. Biol. Cell 3, 349-362, 1992  
A:Title: Differential expression and processing of two cell associated forms of the kit protein  
A:Reference number: A43751; MUID:92330001; PMID:1378327  
A:Accession: A43751  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-214, 'L', '216-273 <HUA>  
A:Cross-references: UNIPARC:UPI000014D0C1; GB:S40364; NID:Q251668; PIDN:AAB22554.2; PID:146929  
A:Note: The authors translated the codon TTG for residue 215 as Trp  
R:Huang, E.; Nocka, K.; Beier, D.R.; Chu, T.Y.; Buck, J.; Lahm, H.W.; Wellner, D.; Leder, P.  
Cell 63, 225-233, 1990  
A:Title: The hematopoietic growth factor KL is encoded by the Sl locus and is the ligand for the c-kit receptor  
A:Reference number: A35976; MUID:91004221; PMID:1698557  
A:Accession: A35976  
A:Status: preliminary; not compared with conceptual translation  
A:Molecule type: mRNA  
A:Residues: 1-206, 'S', '208-270 <HU2>  
A:Cross-references: UNIPARC:UPI000017955D; GB:M38511  
R:Anderson, D.M.; Lyman, S.D.; Baird, A.; Mignall, J.M.; Eisenman, J.; Rauch, C.; March, C.  
Cell 63, 235-243, 1990  
A:Title: Molecular cloning of mast cell growth factor, a hematopoietin that is active in B cell development  
A:Reference number: A35977; MUID:91004223; PMID:1698558  
A:Accession: A35977  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1-273 <AND>  
A:Cross-references: UNIPARC:UPI0000028C9B; GB:M57647; GB:M38436; NID:G199151; PIDN:AAA35976  
R:Copeland, N.G.; Gilbert, D.J.; Cho, B.C.; Donovan, P.J.; Jenkins, N.A.; Cosman, D.; Aruffo, A.  
Cell 63, 175-183, 1990  
A:Title: Mast cell growth factor maps near the steel locus on mouse chromosome 10 and is a member of the steel factor family  
A:Reference number: A35972; MUID:91004216; PMID:1698554  
A:Accession: A35972  
A:Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 26-53 <COP>

A;Cross-references: UNIPARC:UPI000017955E; GB:M59912  
R;Zeebo, K.M.; Williams, D.A.; Geissler, E.N.; Broudy, V.C.; Martin, F.H.; Atkins, H.L.;  
Cattanach, B.M.; Galli, S.J.; Suggs, S.V.  
Cell 63, 213-224, 1990  
A;Title: Stem cell factor is encoded at the Sl locus of the mouse and is the ligand for  
A;Reference number: A35975; MUID:91004220; PMID:1698556  
A;Accession: A35975  
A;Molecule type: mRNA  
A;Residues: 1-201 <ZS>  
A;Cross-references: UNIPARC:UPI000016D02D; GB:M59915; PIDN:AAA40095.1; PID:  
R;Zeebo, K.M.; Wypych, J.; McNiece, I.K.; Lu, H.S.; Smith, K.A.; Karkare, S.B.; Sachdev,  
A.; Langley, K.E.  
Cell 63, 195-201, 1990  
A;Title: Identification, purification, and biological characterization of hematopoietic  
A;Reference number: A35973; MUID:91004218; PMID:2208278  
A;Accession: A35973  
A;Status: preliminary  
A;Molecule type: protein  
A;Residues: 27-29, 'R', 31-39 <ZS2>  
A;Cross-references: UNIPARC:UPI000017955F  
R;Brannan, C.I.; Bedell, M.A.; Resnick, J.L.; Eppig, J.J.; Handel, M.A.; Williams, D.E.;  
Genes Dev. 6, 1832-1842, 1992  
A;Title: Developmental abnormalities in Steel17H mice result from a splicing defect in  
A;Reference number: A44071; MUID:93012940; PMID:1383087  
A;Accession: I48768  
A;Status: preliminary; translated from GB/EMBL/DBJ  
A;Molecule type: mRNA  
A;Residues: 1-206, 'S', 208-273 <RES>  
A;Cross-references: UNIPARC:UPI000016CA07; EMBL:X68989; NID:G395283; PIDN:CAA48778.1; PI  
C;Genetics:  
A;Gene: SLF  
A;Map position: 10  
A;Superfamily: mouse mast cell growth factor  
C;Keywords: extracellular protein; glycoprotein; transmembrane protein

Query Match 78.5%; Score 991; DB 2; Length 273;  
Best Local Similarity 72.2%; Pred. No. 3.2e-72;  
Matches 197; Conservative 19; Mismatches 29; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYQLLLFNLPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNLPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIIVDDLVCEVKENSS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIIVDDLVCEVKENSS 120

QY 121 KDLKSKSPKPRPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEK 174  
DB 121 KDLKSKSPKPRPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEK 174

QY 175 -----KAKNPDPSSLSHWAAMALPALFSLIIGFAPGALYWK 212  
DB 181 KPFMLPPVAASSLRNDSNSSNRKAAPEDSGLTAMALPALISLVIGFAPGALYWK 240

QY 213 QSLTRAVENIQINEDNEISMLOKEREFOV 245  
DB 241 QSLTRAVENIQINEDNEISMLOKEREFOV 273

RESULT 8  
S58313  
stem cell factor precursor - sheep (fragment)  
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)  
C;Date: 14-Jan-1996 #sequence\_revision 01-Mar-1996 #text\_change 09-Jul-2004  
C;Accession: S58313  
R;McInnes, C.J.; Logan, M.; Falconer, V.M.; Rawlins, P.; Huntly, J.; Haig, D.  
submitted to the EMBL Data Library, August 1995  
A;Description: Molecular cloning and biological activity of ovine stem cell factor.  
A;Reference number: S58313  
A;Accession: S58313  
A;Status: preliminary  
A;Molecule type: mRNA

A;Residues: 1-202 <MC1>  
A;Cross-references: UNIPROT:P79368; UNIPARC:UPI000016CAE5; EMBL:Z50743; NID:G940807; PID:  
C;Superfamily: mouse mast cell growth factor

Query Match 59.4%; Score 749.5; DB 2; Length 202;  
Best Local Similarity 83.9%; Pred. No. 5.5e-53;  
Matches 146; Conservative 15; Mismatches 12; Indels 1; Gaps 1;

QY 1 MKKTQTWLTCTIYQLLLFNLPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNLPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIIVDDLVCEVKENSS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIIVDDLVCEVKENSS 120

QY 121 KDLKSKSPKPRPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEK 173  
DB 121 ENVKKSKSPKPRPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEK 174

RESULT 9  
B35974  
stem cell factor protein precursor - rat (fragment)  
C;Species: Rattus norvegicus (Norway rat)  
C;Date: 14-Dec-1990 #sequence\_revision 14-Dec-1990 #text\_change 09-Jul-2004  
C;Accession: B35974; A39805  
R;Martin, F.H.; Suggs, S.V.; Langley, K.B.; Lu, H.S.; Ting, J.; Okino, K.H.; Morris, C.F.  
s, J.C.; Patel, A.C.; Fisher, E.F.; Erjavec, H.O.; Herrera, C.J.; Wypych, J.; Sachdev, R.  
Cell 63, 203-211, 1990  
A;Title: Primary structure and functional expression of rat and human stem cell factor D  
A;Reference number: A35974; MUID:91004219; PMID:2208279  
A;Accession: B35974  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-201 <MAR>  
A;Cross-references: UNIPROT:P21581; UNIPARC:UPI0000144090; GB:M59966; NID:G206861; PIDN:  
R;Lu, H.S.; Clogston, C.L.; Wypych, J.; Fausset, P.R.; Lauren, S.; Mendiaz, E.A.; Zeebo,  
J. Biol. Chem. 266, 8102-8107, 1991  
A;Title: Amino acid sequence and post-translational modification of stem cell factor iso  
A;Reference number: A39805; MUID:91217037; PMID:1708771  
A;Accession: A39805  
A;Status: preliminary  
A;Molecule type: protein  
A;Residues: 'E', 27-190 <LUA>  
A;Cross-references: UNIPARC:UPI000014F57C  
C;Superfamily: mouse mast cell growth factor

Query Match 57.1%; Score 721; DB 2; Length 201;  
Best Local Similarity 79.8%; Pred. No. 1.1e-50;  
Matches 138; Conservative 15; Mismatches 20; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLLLFNLPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNLPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIIVDDLVCEVKENSS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIIVDDLVCEVKENSS 120

QY 121 KDLKSKSPKPRPLFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEK 173  
DB 121 KNVKESLKKPSTRNFTPEEFPRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEK 173

RESULT 10  
S70367  
stem cell factor short form precursor - quail  
C;Species: Coturnix coturnix (quail)  
C;Date: 06-Dec-1996 #sequence\_revision 25-Apr-1997 #text\_change 21-Jul-2000  
C;Accession: S70367  
R;Petitite, J.N.; Kulik, M.J.  
Biochim. Biophys. Acta 1307, 149-151, 1996

A>Title: Cloning and characterization of cDNAs encoding two forms of avian stem cell factor  
A:Reference number: S70366; MUID:96283808; PMID:8679698  
A:Accession: S70367  
A:Molecule type: mRNA  
A:Residues: 1-253 <PET>  
A:Cross-references: UNIPARC:UPI00002B34F; EMBL:U43079; NID:g1150877; PIDN:AAC59934.1; F  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-253/Product: stem cell factor short form #status predicted <MAT>  
F:192-216/Domain: transmembrane #status predicted <TMM>

Query Match 47.9%; Score 605; DB 2; Length 253;  
Best Local Similarity 49.8%; Pred. No. 2.9e-41;  
Matches 126; Conservative 48; Mismatches 71; Indels 8; Gaps 5;

QY 1 MKKTOTWLTCTLYQLLFPNPLVKTGICRNRVTNNVNDVKLVANLPKDYMITLKYPVG 60  
DB 1 MKKAQTWITCFCLQLLLNPLVKTQSSCGNPVTDVNDIAKLVGNLPNDYILITLKYPK 60

QY 61 MDVLPSCWISBVMVQLSDSLTDLDFK---SNISEGLSNYSIIDKLVNIVDDLVECVKE 117  
DB 61 MDSLPHCHWHLWVPEFSRSLHNLQKFPVDISDMSDVLNYSIINNLTIRINDMACLAF 120

QY 118 NSSKD-LKSKPKSPPEPLFTPEEPFRINRSIDAFKDFVASETSDCVSVSTL-SPEKKG 175  
DB 121 DKNKDFIKENGHLVEEDRFIPENFRNFRTIEVYKEFADSLDKNDKIMPSTVETPENDS 180

QY 176 AKNPFGDSSLHWAAMALPALSLIIGAFGALYWKKROP-SLTRAVERNIOIN--REDNEI 232  
DB 181 ALGFTSSSLQGISALTSLLSLLIGFILGVYWKTHPKSPESNETTQCHGCOEENEI 240

QY 233 SMLQEKEREFOV 245  
DB 241 SMLQEKEREHLQV 253

RESULT 11  
JN0637  
stem cell factor precursor - chicken  
C:Species: Gallus gallus (chicken)  
C:Date: 24-Feb-1994 #sequence\_revision 24-Feb-1994 #text\_change 09-Jul-2004  
C:Accession: JN0637  
R:Zhou, J.H.; Ohtaki, M.; Sakurai, M.  
Gene 127, 269-270, 1993  
A>Title: Sequence of a cDNA encoding chicken stem cell factor.  
A:Reference number: JN0637; MUID:93273244; PMID:7684722  
A:Accession: JN0637  
A:Molecule type: mRNA  
A:Residues: 1-287 <ZHO>  
A:Cross-references: UNIPROT:Q09108; UNIPARC:UPI000013563C; GB:D13516; NID:g391648; PIDN:  
A:Experimental source: brain  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-287/Product: stem cell factor #status predicted <MAT>  
F:226-248/Domain: transmembrane #status predicted <TMM>

Query Match 46.3%; Score 584; DB 2; Length 287;  
Best Local Similarity 44.6%; Pred. No. 1.7e-39;  
Matches 128; Conservative 46; Mismatches 71; Indels 42; Gaps 7;

QY 1 MKKTOTWLTCTLYQLLFPNPLVKTGICRNRVTNNVNDVKLVANLPKDYMITLKYPVG 60  
DB 1 MKKAQTWITCFCLQLLLNPLVKAQSSCGNPVTDVNDIAKLVGNLPNDYILITLKYPK 60

QY 61 MDVLPSCWISBVMVQLSDSLTDLDFKSNISGLSNYSIIDKLVNIVDDLVECVKE 117  
DB 61 MDSLPHCHWHLWVPEFSRSLHNLQKFSDISDMSDVLNYSIINNLTIRINDMACLAF 120

QY 118 NSSKD-LKSKPKSPPEPLFTPEEPFRINRSIDAFKDFVASETSDCVSVSTL-SPEKKG 175  
DB 121 DKNKDFIKENGHLVEEDRFIPENFRNFRTIEVYKEFADSLDKNDKIMPSTVETPENDS 180

QY 176 -----AKNPP-----GDSLSLHWAAMALPALSLIIG 201  
DB 181 RVAVTKTISFPFVAASSLRNDSIGNTSSNKNKEALGFISSSSLQGISALTSLLSLLIG 240

QY 202 FAFGALYWKKROP-SLTRAVERNIOIN--EEDNEISMLOEKEREFOV 245  
DB 241 FILGALYWKTHPKSPESNETTQCHGCOEENEISMLOEKEREHLQV 287

RESULT 12  
S70366  
stem cell factor long form precursor - quail  
C:Species: Coturnix coturnix (quail)  
C:Date: 06-Dec-1996 #sequence\_revision 25-Apr-1997 #text\_change 21-Jul-2000  
C:Accession: S70366  
R:Petitte, J.N.; Kulik, M.J.  
Biochim. Biophys. Acta 1307, 149-151, 1996  
A>Title: Cloning and characterization of cDNAs encoding two forms of avian stem cell fa  
A:Reference number: S70366; MUID:96283808; PMID:8679698  
A:Accession: S70366  
A:Molecule type: mRNA  
A:Residues: 1-287 <PET>  
A:Cross-references: UNIPARC:UPI000013563D; EMBL:U43078; NID:g1150875; PIDN:AAC59933.1; F  
C:Superfamily: mouse mast cell growth factor  
C:Keywords: growth factor; transmembrane protein  
F:1-25/Domain: signal sequence #status predicted <SIG>  
F:26-287/Product: stem cell factor long form #status predicted <MAT>  
F:226-250/Domain: transmembrane #status predicted <TMM>

Query Match 46.2%; Score 583; DB 2; Length 287;  
Best Local Similarity 44.3%; Pred. No. 2e-39;  
Matches 127; Conservative 47; Mismatches 71; Indels 42; Gaps 7;

QY 1 MKKTOTWLTCTLYQLLFPNPLVKTGICRNRVTNNVNDVKLVANLPKDYMITLKYPVG 60  
DB 1 MKKAQTWITCFCLQLLLNPLVKTQSSCGNPVTDVNDIAKLVGNLPNDYILITLKYPK 60

QY 61 MDVLPSCWISBVMVQLSDSLTDLDFK---SNISEGLSNYSIIDKLVNIVDDLVECVKE 117  
DB 61 MDSLPHCHWHLWVPEFSRSLHNLQKFPVDISDMSDVLNYSIINNLTIRINDMACLAF 120

QY 118 NSSKD-LKSKPKSPPEPLFTPEEPFRINRSIDAFKDFVASETSDCVSVSTL-SPEKKG 175  
DB 121 DKNKDFIKENGHLVEEDRFIPENFRNFRTIEVYKEFADSLDKNDKIMPSTVETPENDS 180

QY 176 -----AKNPP-----GDSLSLHWAAMALPALSLIIG 201  
DB 181 RVAVTKTISFPFVAASSLRNDSIGNTSSNKNKEALGFISSSSLQGISALTSLLSLLIG 240

QY 202 FAFGALYWKKROP-SLTRAVERNIOIN--EEDNEISMLOEKEREFOV 245  
DB 241 FILGALYWKTHPKSPESNETTQCHGCOEENEISMLOEKEREHLQV 287

RESULT 13  
S29052  
stem cell factor - human (fragments)  
C:Species: Homo sapiens (man)  
C:Date: 22-Nov-1993 #sequence\_revision 10-Nov-1995 #text\_change 09-Jul-2004  
C:Accession: S29052  
R:Lu, H.S.; Clogston, C.L.; Wypych, J.; Parker, V.P.; Lee, T.D.; Swiderek, K.; Baltera  
J.; Langley, K.E.  
Arch. Biochem. Biophys. 298, 150-158, 1992  
A>Title: Post-translational processing of membrane-associated recombinant human stem cel  
A:Reference number: S29052; MUID:92398336; PMID:1381905  
A:Accession: S29052  
A>Status: preliminary  
A:Molecule type: protein  
A:Residues: 1-13;14-30;31-46;47-59;60-86;87-95;96-107;108-124 <LUH>  
A:Cross-references: UNIPROT:Q7M4N8; UNIPARC:UPI0000179563; UNIPARC:UPI0000179564; UNIPAR  
IPARC:UPI000017956A  
C:Superfamily: mouse mast cell growth factor

Job time : 21.2479 secs

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Query Match      38.9%; Score 491.5; DB 2; Length 124;
Best Local Similarity 72.3%; Pred. No. 1.5e-32;
Matches 107; Conservative 0; Mismatches 0; Indels 41; Gaps 4;

QY 26 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWISSEMVVQLSDSLTDL 85
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1 EGICRNRVTNNVK-----DVLPSHCWISSEMVVQLS----- 30

QY 86 DKFSNISISGLSNYSIIDKLNVIVDDLVCEVKENSISKLKSKFKSPPEPLFTPEPFRI 145
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 31 DKFSNISISGLSNYSII-----DDLVECVKENSISKLKSKFKSPPEPLFTPEPFRI 83

QY 146 RSIDAFKDFVASETSDCVSSTLSPEK 173
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 84 RSI-----DFVASETSDCVSSTLSPEK 107

RESULT 14
B35971
mast cell growth factor - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Date: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change 09-Jul-2004
C:Accession: B35971
R:Williams, D.E.; Eisenman, J.; Baird, A.; Rauch, C.; Van Ness, K.; March, C.J.; Park, I.
Cell 63, 167-174, 1990
A:Title: Identification of a ligand for the c-kit proto-oncogene.
A:Reference number: A35971; MUID:91004215; PMID:1698553
A:Accession: B35971
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-51.<WIL>
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI0000179562
A:Superfamily: mouse mast cell growth factor
C:Keywords: transmembrane protein

Query Match      13.9%; Score 175.5; DB 2; Length 51;
Best Local Similarity 72.3%; Pred. No. 1.2e-07;
Matches 34; Conservative 5; Mismatches 7; Indels 1; Gaps 1;

QY 28 ICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWISSEMV 74
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 3 ICGNPVTDNVKDIITKLVANLPNDYMITLNYVAGMDVLPSS-WWLDMDMI 48

RESULT 15
A35971
mast cell growth factor - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Date: 14-Dec-1990 #sequence_revision 14-Dec-1990 #text_change 09-Jul-2004
C:Accession: A35971
R:Williams, D.E.; Eisenman, J.; Baird, A.; Rauch, C.; Van Ness, K.; March, C.J.; Park, I.
Cell 63, 167-174, 1990
A:Title: Identification of a ligand for the c-kit proto-oncogene.
A:Reference number: A35971; MUID:91004215; PMID:1698553
A:Accession: A35971
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-49.<WIL>
A:Cross-references: UNIPROT:P20826; UNIPARC:UPI0000179561
A:Superfamily: mouse mast cell growth factor
C:Keywords: transmembrane protein

Query Match      13.7%; Score 172.5; DB 2; Length 49;
Best Local Similarity 73.5%; Pred. No. 2e-07;
Matches 36; Conservative 4; Mismatches 6; Indels 3; Gaps 2;

QY 28 ICRNRVTNNVKDVTKLVANLPKDYMITLKYVPGMDVLPSCWISSEMV 76
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 3 ICGNPVTDNVKDIITKLVANLPNDYMITLNYVAGMDVLPSS--WY-DMVIQ 49

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GenCore version 5.1.7

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OM protein - protein search, using sw model

Run on: February 22, 2006, 18:05:51 ; Search time 126.212 Seconds  
(without alignments)  
1369.555 Million cell updates/sec

Title: US-10-620-642-63

Perfect score: 1262

Sequence: 1 MKKTQTWLTCTIYLQLLFFN.....NEEDNEISMLQEKREFOEV 245

Scoring table:

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

UniProt\_05.80.\*

1: uniprot\_prot.\*

2: uniprot\_trembl.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1255	99.4	245	2	Q86524_9PRIM
2	1231	97.5	273	1	SCF HUMAN
3	1053.5	83.5	274	1	SCF HORSE
4	1051.5	83.3	274	1	SCF FELCA
5	1037.5	82.2	274	1	SCF PIG
6	1023	81.1	245	2	Q54A14_RAT
7	1021.5	80.9	274	1	SCF CAPHI
8	1018.5	80.7	274	1	SCF BOVIN
9	1014.5	80.4	274	1	SCF CANFA
10	1014.5	80.4	274	1	SCF MUSVI
11	1005	79.6	238	2	Q86D22_HUMAN
12	992	78.6	273	1	SCF RAT
13	991	78.5	267	1	SCF MOUSE
14	990.5	78.5	273	1	SCF SHEEP
15	754	59.7	164	2	Q864L9_MACMU
16	715	56.7	208	2	Q64384_9MURI
17	715	56.7	208	2	Q78ED8_MOUSE
18	584	46.3	287	1	SCF CHICK
19	583	46.2	287	1	SCF COTJA
20	509	40.3	123	2	Q61854_MOUSE
21	491.5	38.9	124	2	Q7M4N8_HUMAN
22	480	38.0	160	2	Q8C9K1_MOUSE
23	339	26.9	271	2	Q9YGP2_ANGME
24	315	25.0	270	2	Q7ZXV0_XENLA
25	286	22.7	270	2	Q8AYN7_XENLA
26	277	21.9	270	2	Q6DTW3_XENLA
27	207.5	16.4	272	2	Q56JH6_BRARE
28	153.5	12.2	234	2	Q4S1A5_TETNG
29	145	11.5	36	2	Q8SPW7_CANFA
30	136	10.8	267	2	Q56JH5_BRARE
31	128	10.1	1697	2	Q81FM4_PLAF7

32	128	10.1	1711	2	Q8MWP2_PLAFA	Q8mwp2 plasmodium
33	128	10.1	1713	2	Q8MWP1_PLAFA	Q8mwp1 plasmodium
34	128	10.1	1716	2	Q8MWH2_PLAFA	Q8mwh2 plasmodium
35	109	8.6	937	2	Q9MAL4_ARATH	Q9mal4 arabidopsis
36	107.5	8.5	330	2	Q424Q3_PLABE	Q424q3 arabidopsis
37	106.5	8.4	1665	2	Q6YA77_PLARE	Q6ya77 plasmodium
38	106	8.4	812	2	Q74191_LACJO	Q74191 lactobacill
39	105.5	8.4	1515	2	Q8IM40_PLAF7	Q8im40 plasmodium
40	103.5	8.2	814	2	Q5CR06_CRYPO	Q5cr06 cryptospori
41	103.5	8.2	814	2	Q5CLA9_CRYHO	Q5cla9 cryptospori
42	102.5	8.1	919	2	Q9LPD8_ARATH	Q9lpd8 arabidopsis
43	102.5	8.1	1498	2	Q96VK6_EMENI	Q96vk6 emericella
44	102.5	8.1	1498	2	Q9P884_EMENI	Q9p884 emericella
45	102.5	8.1	5542	2	Q7YXX2_CRYPV	Q7yxx2 cryptospori

## ALIGNMENTS

RESULT 1  
Q86524\_9PRIM PRELIMINARY; PRT; 245 AA.  
ID Q86524\_9PRIM PRELIMINARY; PRT; 245 AA.  
AC Q86524\_9PRIM PRELIMINARY; PRT; 245 AA.  
DT 01-JUN-2003 (TRENBLrel. 24, Created)  
DT 01-JUN-2003 (TRENBLrel. 24, Last sequence update)  
DT 01-MAR-2004 (TRENBLrel. 26, Last annotation update)  
DE Stem cell factor.  
OS Papio cynocephalus x Papio anubis.  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;  
OC Cercopitheidae; Cercopitheciae; Papio.  
OX NCBI\_TaxID=208510;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RA Kalina T., Storek J.;  
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.  
DR EMBL; AY226584; AA072537.1; -, mRNA.  
DR HSSP; P21583; 1EXZ.  
DR SMR; Q86524; 29-161.  
DR GO; GO:0016020; C:membrane; IEA.  
DR GO; GO:0005173; F:stem cell factor receptor binding; IEA.  
DR GO; GO:0007155; P:cell adhesion; IEA.  
DR InterPro; IPR003452; SCF.  
DR Pfam; PF02404; SCF; 1.  
SQ SEQUENCE 245 AA; 27887 MW; 937B3CAF28D694FA CRC64;

Query Match	99.4%;	Score 1255;	DB 2;	Length 245;
Best Local Similarity	99.2%;	Pred. No. 1.1e-90;		
Matches 243;	Conservative 1;	Mismatches 1;	Indels 0;	Gaps 0;
QY	1	MKKTQTWLTCTIYQLLLFNPLVKTEGICRNRRVTNNVKDVTKLVANLPKDYMITLKYVPG	60	
Db	1	MKKTQTWLTCTIYQLLLFNPLVKTEGICRNRRVTNNVKDVTKLVANLPKDYMITLKYVPG	60	
QY	61	MDVLPSCHWISSEMVVQLSDSLTDLKDFNSISEGLSNYSIIDKLVNIYDDLVECVKENS	120	
Db	61	MDVLPSCHWISSEMVVQLSDSLTDLKDFNSISEGLSNYSIIDKLVNIYDDLVECVKENS	120	
QY	121	KDLKSKFKGPEPLFTPEEFPFRIFNRSIDAFKDFVASETSDCVWSSSTLSPEKGAQNPP	180	
Db	121	KDLKSKFKGPEPLFTPEEFPFRIFNRSIDAFKDFVASETSDCVWSSSTLSPEKGAQNPP	180	
QY	181	GDSSLHWAAMALPALFSLIIGFAGFALYKKRQPSLTRAVENTIQINEEDNEISMLQEKER	240	
Db	181	GDSSLHWAAMALPALFSLIIGFAGFALYKKRQPSLTRAVENTIQINEEDNEISMLQEKER	240	
QY	241	EFQEV 245		
Db	241	EFQEV 245		

RESULT 2  
SCF\_HUMAN



Query Match 97.5%; Score 1231; DB 1; Length 273;  
 Best Local Similarity 89.4%; Pred. No. 9.4e-89;  
 Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLLFNPLVTEGICRNRVNNVNDVTKLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFNPLVTEGICRNRVNNVNDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWMMVQVLSLTDLLKPSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWMMVQVLSLTDLLKPSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKSPKPEPLTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKG----- 174  
 DB 121 KDLKSKSPKPEPLTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSV 180

QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 212  
 DB 181 TKPFWLPPVAASSLRNDSSSNRKASNFTGDSNLQWAMALPAFSLVIGFAPGALYWK 240

QY 213 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 245  
 DB 241 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 273

RESULT 3

SCF HORSE  
 ID - SCF HORSE STANDARD; PRT; 274 AA.  
 AC Q95MD2; Q62765; Q95MG7; Q95MG8; Q95N15;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DE 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast cell growth factor) (MGP).  
 DE Name=KITLG; Synonyms=MGP, SCF;  
 OS Equus caballus (Horse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.  
 OX NCBI\_TaxID=9796;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE OF 4-264.  
 RA Terry R.R., Mickelson J.R., Schmutz S., Cothran E.G., Bailey E.;  
 RT "Equus caballus mast cell growth factor (MGP).";  
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE OF 12-267.  
 RA TISSUE-Skin;  
 RA Rieder S., Checa-Cortes M.L., Joerg H., Stranzinger G.;  
 RT "An equine sequence homologous to stem cell factor (KIT-ligand).";  
 RL Submitted (MAR-1998) to the EMBL/GenBank/DBJ databases.  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE OF 107-202 AND 227-274.  
 RA Terry R.R., Bailey E.F., Cothran E.G.;  
 RT "Evaluation of MGF as the candidate gene for Appaloosa spotting.";  
 RL Submitted (APR-2001) to the EMBL/GenBank/DBJ databases.  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE OF 147-197.  
 RA Castano A.R., Shive Y.-J., Lyons L.A., Laughlin T.F., O'Brien S.J., Murray J.D., Bowling A.T.;  
 RT "A primary Human-Horse comparative gene map.";  
 RL Submitted (JAN-2000) to the EMBL/GenBank/DBJ databases.  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to augment the proliferation of both myeloid and lymphoid hematopoietic progenitors in bone marrow culture. Mediates also cell-cell adhesion. Acts synergistically with other cytokines, probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a secreted soluble form (By similarity).  
 CC -!- PTM: A soluble form is produced by proteolytic processing of the extracellular domain (By similarity).  
 CC -!- SIMILARITY: Belongs to the SCF family.

CC

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DR EMBL; AF401625; AAK94474.1; -; mRNA.  
 DR EMBL; AF053498; AAC97076.1; -; mRNA.  
 DR EMBL; AF367704; AAK63249.1; -; Genomic DNA.  
 DR EMBL; AF367706; AAK63250.1; -; Genomic DNA.  
 DR EMBL; AF130770; AAF36716.1; -; Genomic DNA.  
 DR SMR; Q95MD2; 29-161.  
 DR InterPro; IPR012351; Cytokine\_4\_hlx.  
 DR InterPro; IPR003452; SCF.  
 DR PANTHER; PTHR11574; SCF; 1.  
 DR Pfam; PF02404; SCF; 1.  
 KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
 FT SIGNAL 1 25  
 FT CHAIN 26 274  
 FT TOPO\_DOM 26 215  
 FT TRANSMEM 216 238  
 FT TOPO\_DOM 239 274  
 FT CARBOHYD 90 90  
 FT CARBOHYD 97 97  
 FT CARBOHYD 145 145  
 FT CARBOHYD 196 196  
 FT CARBOHYD 207 207  
 FT DISULFID 29 114  
 FT DISULFID 68 164  
 FT CONFLICT 15 15  
 FT CONFLICT 241 241  
 FT CONFLICT 241 241  
 SQ SEQUENCE 274 AA; 31217 MW; 96C1D4C9059132F2 CRC64;

Query Match 83.5%; Score 1053.5; DB 1; Length 274;  
 Best Local Similarity 76.6%; Pred. No. 9.1e-75;  
 Matches 210; Conservative 19; Mismatches 16; Indels 29; Gaps 2;

QY 1 MKKTQTWLTCTIYQLQLLFNPLVTEGICRNRVNNVNDVTKLVANLPKDYMITLKYVPG 60  
 DB 1 MKKTQTWLTCTIYQLQLLFNPLVTEGICRNRVNNVNDVTKLVANLPKDYMITLKYVPG 60

QY 61 MDVLPSCWISWMMVQVLSLTDLLKPSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLPSCWISWMMVQVLSLTDLLKPSNISSEGLSNYSIIDKLVNIVDDLVECVKENS 120

QY 121 KDLKSKSPKPEPLTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKG----- 174  
 DB 121 ENVKSKYKQESRLTPEEPFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKDSRVSV 180

QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 211  
 DB 181 TKPFWLPPVAASSLRNDSSSNRKASNFTGDSNLQWAMALPAFSLVIGFAPGALYWK 240

QY 212 QPSLTRAVENTIINEEDNEISMLQEKEREFOEV 245  
 DB 241 KQPNLTRAVENTIINEEDNEISMLQEKEREFOEV 274

RESULT 4

SCF FELCA  
 ID - SCF FELCA STANDARD; PRT; 274 AA.  
 AC P79169;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast cell growth factor) (MGP).  
 DE Name=KITLG; Synonyms=SCF;  
 OS Felis silvestris catus (Cat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Felidae; Felinae; Felis.

```
OX NCBI_TaxID=9685;
RN [1]
RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).
RX MEDLINE=97069946; PubMed=8912926;
RA Dunham S.P., Onions D.E.;
RT "The cloning and sequencing of cDNAs encoding two isoforms of feline
RL stem cell factor."
RL DNA Seq. 6:233-237(1996).
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).
CC Also exists as a secreted soluble form (isoform 1 only) (By
CC similarity).
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=P79169-1; Sequence=Displayed;
CC Name=2;
CC IsoId=P79169-2; Sequence=VSP_006021;
CC -!- PTM: A soluble form is produced by proteolytic processing of
CC isoform 1 in the extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC -----
CC EMBL; D50833; BAA09445.1; -; mRNA.
DR SMR; P79169; 29-161.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR003452; SCF.
DR PANTHER; PTHR11574; SCF; 1.
DR Pfam; PF02404; SCF; 1.
DR Signal; Transmembrane.
KW Potential.
FT CHAIN 1 25
FT TOPO_DOM 26 274
FT EXTRACELLULAR (Potential).
FT TRANSMEM 216 238
FT TOPO_DOM 239 274
FT CARBOHYD 90 90
FT CARBOHYD 97 97
FT CARBOHYD 145 145
FT CARBOHYD 196 196
FT DISULFID 29 114
FT DISULFID 68 164
FT VARSPIC 175 203
FT
FT SEQUENCE 274 AA; 30988 MW; C5B78DB4791237BE CRC64;
Query Match 83.3%; Score 1051.5; DB 1; Length 274;
Best Local Similarity 76.6%; Pred. No. 1.3e-74;
Matches 210; Conservative 17; Mismatches 18; Indels 29; Gaps 2;
OY 1 MKKTQTWLTCTIYQLQLLFPNLVTEGICRNRTVNNVDVTKLVANLPKDYMITLKYYPG 60
DB 1 MKKTQTWLTCTIYQLQLLFPNLVTEGICRNRTVNNVDVTKLVANLPKDYMITLKYYPG 60
OY 61 MDVLPSCWISVMVQLSDLTLLDKFNSISSEGLSNYSIIDKLVNIVDDLVECVKENS 120
DB 61 MDVLPSCWISVMVQLSVLSLTLDDKFNISSEGLSNYSIIDKLVNIVDDLVECVGESS 120
OY 121 KDLKSKFSKPEPRLTPTPEFFRIFNRSIDAFKDF - VVASSETSDCVVSTLSPKSG - 174
DB 121 ENVKSSKSKPEPRLTPTPEFFRIFNRSIDAFKDFLEWVASKTSECVCVSTLSPKDSRVSV 180
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OY 175 -----KAKNPPOGDSLHWAMALPALFSLIIGFAFGALYWK 211
DB 181 TKPMLPPVAASSLRNDSSSSNRKATNFIEDSIQWAMALPACFSLVIGFAFGAYWK 240
OY 212 RQPSLTRAIVENIQINEEDNEISMLQEKERFQEV 245
DB 241 KQPNLTTRVENIQINEEDNEISMLQEKERFQEV 274
RESULT 5
SCF_PIG STANDARD; PRT; 274 AA.
ID - SCF_PIG
AC Q29030;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
DE cell growth factor) (MGF).
GN Name=KITLG; Synonyms=MGF;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=94146218; PubMed=7508758;
RA Zhang Z., Anghony R.V.;
RT "Porcine stem cell factor/c-kit ligand: its molecular cloning and
RT localization within the uterus."
RL Biol. Reprod. 50:95-102(1994).
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -!- PTM: A soluble form is produced by proteolytic processing of the
CC extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC -----
CC EMBL; L07786; AAA53670.1; -; mRNA.
DR PIR; I46575; I46575.
DR SMR; Q29030; 29-161.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR003452; SCF.
DR PANTHER; PTHR11574; SCF; 1.
DR Pfam; PF02404; SCF; 1.
DR Signal; Transmembrane.
KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
FT CHAIN 1 25
FT TOPO_DOM 26 274
FT EXTRACELLULAR (Potential).
FT TRANSMEM 216 238
FT TOPO_DOM 239 274
FT CARBOHYD 90 90
FT CARBOHYD 97 97
FT CARBOHYD 145 145
FT CARBOHYD 196 196
FT DISULFID 29 114
FT DISULFID 68 164
FT SEQUENCE 274 AA; 31119 MW; FF3C87114D7BA6A6 CRC64;
Query Match 82.2%; Score 1037.5; DB 1; Length 274;
Best Local Similarity 75.2%; Pred. No. 1.7e-73;
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Matches 206; Conservative 22; Mismatches 17; Indels 29; Gaps 2;
QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMTLKYPG 60
DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMTLKYPG 60
QY 61 MDVLPSCWISMMVQVLSLTDLLDKFSNYSIIIDKLVNVDVLCVCKENS 120
DB 61 MDVLPSCWISMMVQVLSLTDLLDKFSNYSIIIDKLVNVDVLCVCKENS 120
QY 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDF-VWASSETSDCVSSTLSPGK- 174
DB 121 ENVKSSKSPRLPTPEFFRIFNRSIDAFKDFVWASSETSDCVSSTLSPGKSRVS 180
QY 175 -----KAKNPPGSSLSHMAALPALFSLIIGFAFGALYWK 211
DB 181 TKPFMLPPVAASSLRNDSSSRKASDSISLQWAAVALPAPFSLVIGFAFGALYWK 240
QY 212 RQPSLITRAVENIQINEEDNEISMLQEKEREFOEV 245
DB 241 KQPNLTRTVENIQINEEDNEISMLQEKEREFOEV 274

RESULT 6
Q54A14 RAT PRELIMINARY; PRT; 245 AA.
AC Q54A14;
DT 13-SEP-2005 (TREMELrel. 31, Created)
DT 13-SEP-2005 (TREMELrel. 31, Last sequence update)
DE Stem cell factor KU-2.
GN Name=scf;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN NUCLEOTIDE SEQUENCE.
RP STRAIN=Shiba; TISSUE=Brain;
RA Yanagisawa N., Tanaka S., Yamanouchi K., Tojo H., Tachi C.;
RT "Identification of splicing isoforms of caprine stem cell factor
RT (SCF) transcripts and expression patterns of the two major isoforms,
RT GSCF825 and GSCF741, in the brain and the skin of adult and fetal
RT Shiba goats, Capra hircus";
RL Submitted (MAR-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -!- PTM: A soluble form is produced by proteolytic processing of the
CC extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR SMC; Q95M19; 29-161.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR003452; SCF.
DR PANTHER; PTHR11574; SCF; 1.
DR Pfam; PF02404; SCF; 1.
KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
FT SIGNAL 1 25
FT CHAIN 26 274
FT TOPO_DOM 26 215
FT TRANSMEM 216 238
FT TOPO_DOM 239 274
FT CARBOHYD 90 97
FT CARBOHYD 145 145
FT CARBOHYD 196 196
FT DISULFID 29 114
FT DISULFID 68 164
SQ SEQUENCE 274 AA; 31053 MW; BBF669A509BF65D CRC64;

Query Match 80.9%; Score 1021.5; DB 1; Length 274;
Best Local Similarity 74.5%; Pred. No. 3e-72;
Matches 204; Conservative 20; Mismatches 21; Indels 29; Gaps 2;
QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMTLKYPG 60
DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMTLKYPG 60
QY 61 MDVLPSCWISMMVQVLSLTDLLDKFSNYSIIIDKLVNVDVLCVCKENS 120
DB 61 MDVLPSCWISMMVQVLSLTDLLDKFSNYSIIIDKLVNVDVLCVCKENS 120
QY 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDFVWASSETSDCVSSTLSPGKAKNPP 180
DB 121 KNVKSLLKPPETNPTPEFFRIFNRSIDAFKDFVWASSETSDCVSSTLSPGKAKNPP 180
QY 181 GDSSLHWAAMALPALFSLIIGFAFGALYWKQRPSLITRAVENIQINEEDNEISMLQEK 240
DB 181 EDPGLQWAMALPALISLIVIGFAFGALYWKQRPSLITRAVENIQINEEDNEISMLQEK 240
QY 241 EFQEV 245
DB 241 EFQEV 245
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RESULT 7
SCF_CAPHI
ID SCF_CAPHI STANDARD; PRT; 274 AA.
AC Q95M19;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast
DE cell growth factor) (MGF).
GN Name=KITLG; Synonyms=SCF;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN NUCLEOTIDE SEQUENCE.
RP STRAIN=Shiba; TISSUE=Brain;
RA Yanagisawa N., Tanaka S., Yamanouchi K., Tojo H., Tachi C.;
RT "Identification of splicing isoforms of caprine stem cell factor
RT (SCF) transcripts and expression patterns of the two major isoforms,
RT GSCF825 and GSCF741, in the brain and the skin of adult and fetal
RT Shiba goats, Capra hircus";
RL Submitted (MAR-1997) to the EMBL/GenBank/DBJ databases.
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a
CC secreted soluble form (By similarity).
CC -!- PTM: A soluble form is produced by proteolytic processing of the
CC extracellular domain (By similarity).
CC -!- SIMILARITY: Belongs to the SCF family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR SMC; Q95M19; 29-161.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR003452; SCF.
DR PANTHER; PTHR11574; SCF; 1.
DR Pfam; PF02404; SCF; 1.
KW Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.
FT SIGNAL 1 25
FT CHAIN 26 274
FT TOPO_DOM 26 215
FT TRANSMEM 216 238
FT TOPO_DOM 239 274
FT CARBOHYD 90 97
FT CARBOHYD 145 145
FT CARBOHYD 196 196
FT DISULFID 29 114
FT DISULFID 68 164
SQ SEQUENCE 274 AA; 31053 MW; BBF669A509BF65D CRC64;

Query Match 80.9%; Score 1021.5; DB 1; Length 274;
Best Local Similarity 74.5%; Pred. No. 3e-72;
Matches 204; Conservative 20; Mismatches 21; Indels 29; Gaps 2;
QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMTLKYPG 60
DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMTLKYPG 60
QY 61 MDVLPSCWISMMVQVLSLTDLLDKFSNYSIIIDKLVNVDVLCVCKENS 120
DB 61 MDVLPSCWISMMVQVLSLTDLLDKFSNYSIIIDKLVNVDVLCVCKENS 120
QY 121 KDLKSKFSKSPRLPTPEFFRIFNRSIDAFKDFVWASSETSDCVSSTLSPGKAKNPP 180
DB 121 KNVKSLLKPPETNPTPEFFRIFNRSIDAFKDFVWASSETSDCVSSTLSPGKAKNPP 180
QY 181 GDSSLHWAAMALPALFSLIIGFAFGALYWKQRPSLITRAVENIQINEEDNEISMLQEK 240
DB 181 EDPGLQWAMALPALISLIVIGFAFGALYWKQRPSLITRAVENIQINEEDNEISMLQEK 240
QY 241 EFQEV 245
DB 241 EFQEV 245
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Qy 121 KDLKSKSPKSPRLFTPEEFRIENRSIDAFKDF-VVASETSDCVSSTLSPEKG----- 174
Db 121 ENVKSSKSPPEPQFTPEKFGFNKSIDAFKDLIVASTVSECVISSTSPKDSRVSV 180
Qy 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 211
Db 181 TKPMLPVPVAASSLRNDSSSNRKASNIEDSSLQWAAVALPAPFSLVIGFAGALYWK 240
Qy 212 RQPSLTRAVENTIOINEEDNEISMLQEKERFQEV 245
Db 241 KQPNLTRTVENRQINEEDNEISMLQEKERFQEV 274

RESULT 8
SCF_BOVIN
ID - SCF_BOVIN STANDARD; PRT; 274 AA.
AC Q26132; Q9TU74;
DT 28-FEB-2003 (Rel. 41, Created)
DT 28-FEB-2003 (Rel. 41, Last sequence update)
DE 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
DE cell growth factor) (MGF).
GN Name=KITLG; Synonyms=SCF;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]_
RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).
RC TISSUE=Spleen;
RX MEDLINE=94339176; PubMed=7520283; DOI=10.1016/0167-4889(94)90084-1;
RT Zhou J., Hikono H., Ohkaki M., Kubota T., Sakurai M.;
RT "Cloning and characterization of cDNAs encoding two normal isoforms of
RT bovine stem cell factor.";
RL Biochim. Biophys. Acta 1223:148-150(1994).
RN [2]
RP NUCLEOTIDE SEQUENCE (ISOFORM 1).
RC TISSUE=Fetal brain;
RA Kudo T.;
RT "Bovine counterpart of stem cell factor.";
RL Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.
RN [3]
RP NUCLEOTIDE SEQUENCE OF 204-239, AND VARIANT ASP-218.
RC STRAIN=Belgian Blue;
RX MEDLINE=99315331; PubMed=10384045; DOI=10.1007/s003359901076;
RA Seitz J.J., Schmutz S.M., Thue T.D., Buchanan F.C.;
RT "A missense mutation in the bovine MGF gene is associated with the
RT roan phenotype in Belgian Blue and Shorthorn cattle.";
RL Mamm. Genome 10:710-712(1999).
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins (By similarity).
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).
CC Also exists as a secreted soluble form (isoform 1 only) (By
CC similarity).
CC -!- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=Q26132-1; Sequence=Displayed;
CC Name=2;
CC IsoId=Q26132-2; Sequence=VSP 006020;
CC -!- PTM: A soluble form is produced by proteolytic processing of
CC isoform 1 in the extracellular domain (By similarity).
CC -!- POLYMORPHISM: The roan locus is responsible for the coat
CC coloration of Belgian Blue and Shorthorn cattle. The solid-colored
CC and white animals are homozygotes, and the roan animals, with
CC intermingled colored and white hairs, are heterozygous. The roan
CC phenotype is due to the Asp-218 mutation.

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CC -!- SIMILARITY: Belongs to the SCF family.
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CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
DR EMBL; D28934; BAA06061.1; -; mRNA.
DR EMBL; AB033716; BAA94808.1; -; mRNA.
DR EMBL; AF120154; AAD55355.1; -; Genomic_DNA.
DR PIR; S47571; S47571.
DR SMR; Q28132; 29-161.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR Panther; PTHR11574; SCF; 1.
DR Pfam; PF02404; SCF; 1.
KW Polymorphism; Signal; Transmembrane.
FT SIGNAL 1 25 Potential.
FT CHAIN 26 274 Kit ligand.
FT TOPO_DOM 26 215 Extracellular (Potential).
FT TRANSMEM 216 238 Potential.
FT TOPO_DOM 239 274 Cytoplasmic (Potential).
FT CARBOHYD 90 90 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 145 145 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 196 196 N-linked (GlcNAc...) (Potential).
FT DISULFID 29 114 By similarity.
FT DISULFID 68 164 By similarity.
FT VARSPPLIC 175 203 DSRVSVTKPMLPVPVAASSLRNDSSSNR -> G (in
FT isoform 2).
FT VARIANT 218 218 A -> D (in roan allele).
FT SEQUENCE 274 AA; 31015 MW; D6C1DD877B0CB12B CRC64;
Query Match 80.7%; Score 1018.5; DB 1; Length 274;
Best Local Similarity 74.1%; Pred. No. 5.2e-72;
Matches 203; Conservative 20; Mismatches 22; Indels 29; Gaps 2;
Qy 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDMITLKYPVG 60
Db 1 MKKTQTWILTCIYLQLLFNPLVKTGICRNRVTNNVKDVKLVANLPKDMITLKYPVG 60
Qy 61 MDVLPSCWISSEMVVOLSDLTLLDKFNSISSELSNYIIDKLVINIVDDLVCECKNSS 120
Db 61 MDVLPSCWISSEMVVOLSDLTLLDKFNSISSELSNYIIDKLVINIVDDLVCECKNSS 120
Qy 121 KDLKSKSPKSPRLFTPEEFRIENRSIDAFKDF-VVASETSDCVSSTLSPEKG----- 174
Db 121 ENVKSSKSPPEPQFTPEKFGFNKSIDAFKDLIVASTVSECVISSTSPKDSRVSV 180
Qy 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWK 211
Db 181 TKPMLPVPVAASSLRNDSSSNRKASNIEDSSLQWAAVALPAPFSLVIGFAGALYWK 240
Qy 212 RQPSLTRAVENTIOINEEDNEISMLQEKERFQEV 245
Db 241 KQPNLTRTVENRQINEEDNEISMLQEKERFQEV 274

RESULT 9
SCF_CANFA
ID - SCF_CANFA STANDARD; PRT; 274 AA.
AC Q06220; Q8SPM6;
DT 01-JUN-1994 (Rel. 29, Created)
DT 01-JUN-1994 (Rel. 29, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
DE cell growth factor) (MGF).
GN Name=KITLG; Synonyms=MGF;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;

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OC Canis.  
 RN NCBI\_TaxID=9615;  
 RP [1]  
 RC NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=93106145; PubMed=1281786;  
 RA Shull R.M., Suggs S.V., Langley K.E., Okino K.H., Jacobsen F.W.,  
 RA Martin F.H.;  
 RT "Canine stem cell factor (c-kit ligand) supports the survival of  
 RT hematopoietic progenitors in long-term canine marrow culture.";  
 RL Exp. Hematol. 20:1118-1124(1992).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE OF 17-274.  
 RC TISSUE=tail;  
 RA Schmutz S.M., Berryere T.G.;  
 RT Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.  
 RL -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
 CC augment the proliferation of both myeloid and lymphoid  
 CC hematopoietic progenitors in bone marrow culture. Mediates also  
 CC cell-cell adhesion. Acts synergistically with other cytokines,  
 CC probably interleukins.  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a  
 CC secreted soluble form.  
 CC -!- DEVELOPMENTAL STAGE: Acts in the early stages of hematopoiesis.  
 CC -!- PTM: A soluble form is produced by proteolytic processing of the  
 CC extracellular domain (By similarity).  
 CC -!- SIMILARITY: Belongs to the SCP family.  
 CC  
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC  
 CC EMBL; S53329; AAB24619.1; -; mRNA.  
 CC EMBL; AY094361; AAM16280.1; -; mRNA.  
 CC PIR; I46929; I46929.  
 CC SMR; Q06220; 29-161.  
 CC Eneembl; ENSCAFG0000006091; Canis familiaris.  
 CC InterPro; IPR012351; Cytokine\_4\_hlx.  
 CC InterPro; IPR003452; SCF.  
 CC PANTHER; PTHR11574; SCF; 1.  
 CC Pfam; PF02404; SCF; 1.  
 CC Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
 KW SIGNAL 1 25  
 FT CHAIN 26 274  
 FT TOPO DOM 26 215  
 FT TRANSMEM 216 238  
 FT TOPO DOM 239 274  
 FT CARBOHYD 90 90  
 FT CARBOHYD 97 97  
 FT CARBOHYD 145 145  
 FT CARBOHYD 196 196  
 FT DISULFID 29 114  
 FT DISULFID 68 164  
 SQ SEQUENCE 274 AA; 30870 MW; 4182BB9AED00793B CRC64;  
 Query Match 80.4%; Score 1014.5; DB 1; Length 274;  
 Best Local Similarity 74.8%; Pred. No. 1.1e-71;  
 Matches 205; Conservative 17; Mismatches 23; Indels 29; Gaps 2;  
 QY 1 MKKQTWLTCTLYQLLQNFPLVKTGEGICRNRVTNNKDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKQTWLTCTLYQLLQNFPLVKTGEGICRNRVTNNKDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLFCHWISVMVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLFCHWISVMVQLSVSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECTEGYSF 120  
 QY 121 KDLKSPKSPRLTPPEFFRPNRSIDAFKDLSTVASKSECVVSTSLSPDKDSRVSV 180  
 DB 121 ENVKAPKSPRLTPPEFFRPNRSIDAFKDLSTVASKSECVVSTSLSPDKDSRVSV 180

DB 121 ENVKAPKSPRLTPPEFFRPNRSIDAFKDLSTVASKSECVVSTSLSPDKDSRVSV 180  
 QY 175 -----KAKNPPGGSSSLHWAAMALPALFSLIIGFAGLYWKK 211  
 DB 181 TKPFMLPPVAASSLRNDSSSSNRKASNSIGDSNLQWAAWALPAFSLVIGFAGLYWKK 240  
 QY 212 ROPSLTRAVENIQINEEDNEISMLQEKEREPOEV 245  
 DB 241 KOPNLTRTVENIQINEEDNEISMLQEKEREPOEV 274  
 RESULT 10  
 SCF\_MUSVI  
 ID SCF\_MUSVI STANDARD; PRT; 274 AA.  
 AC Q95N18; Q95MNS;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast  
 DE cell growth factor) (MGF).  
 OS Name=KITLG; Synonyms=SCF;  
 GN Mustela vison (American mink).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae;  
 OC Mustelinae; Mustela.  
 OX NCBI\_TaxID=9667;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).  
 RA Bennett R.D., Murphy B.D.;  
 RL Submitted (NOV-2000) to the EMBL/GenBank/DBJ databases.  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
 CC augment the proliferation of both myeloid and lymphoid  
 CC hematopoietic progenitors in bone marrow culture. Mediates also  
 CC cell-cell adhesion. Acts synergistically with other cytokines,  
 CC probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a  
 CC secreted soluble form (By similarity).  
 CC -!- ALTERNATIVE PRODUCTS:  
 CC Event=Alternative splicing; Named isoforms=2;  
 CC Name=1;  
 CC IsoId=Q95N18-1; Sequence=Displayed;  
 CC Name=2;  
 CC IsoId=Q95N18-2; Sequence=VSP\_006024;  
 CC -!- PTM: A soluble form is produced by proteolytic processing of  
 CC isoform 1 in the extracellular domain (By similarity).  
 CC -!- SIMILARITY: Belongs to the SCP family.  
 CC  
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC  
 CC EMBL; AY013712; AAG37434.1; -; mRNA.  
 CC EMBL; AF323757; AAK73366.1; -; mRNA.  
 CC SMR; Q95N18; 29-161.  
 CC InterPro; IPR012351; Cytokine\_4\_hlx.  
 CC InterPro; IPR003452; SCF.  
 CC PANTHER; PTHR11574; SCF; 1.  
 CC Pfam; PF02404; SCF; 1.  
 CC Alternative splicing; Cell adhesion; Glycoprotein; Growth factor;  
 KW Signal; Transmembrane.  
 FT SIGNAL 1 25  
 FT CHAIN 26 274  
 FT TOPO DOM 26 215  
 FT TRANSMEM 216 238  
 FT TOPO DOM 239 274  
 FT CARBOHYD 90 90  
 FT CARBOHYD 97 97  
 FT CARBOHYD 145 145  
 FT CARBOHYD 196 196  
 FT DISULFID 29 114  
 FT DISULFID 68 164  
 SQ SEQUENCE 274 AA; 30870 MW; 4182BB9AED00793B CRC64;  
 Query Match 80.4%; Score 1014.5; DB 1; Length 274;  
 Best Local Similarity 74.8%; Pred. No. 1.1e-71;  
 Matches 205; Conservative 17; Mismatches 23; Indels 29; Gaps 2;  
 QY 1 MKKQTWLTCTLYQLLQNFPLVKTGEGICRNRVTNNKDVTKLVANLPKDYMITLKYPVG 60  
 DB 1 MKKQTWLTCTLYQLLQNFPLVKTGEGICRNRVTNNKDVTKLVANLPKDYMITLKYPVG 60  
 QY 61 MDVLFCHWISVMVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECVKENS 120  
 DB 61 MDVLFCHWISVMVQLSVSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVECTEGYSF 120  
 QY 121 KDLKSPKSPRLTPPEFFRPNRSIDAFKDLSTVASKSECVVSTSLSPDKDSRVSV 180  
 DB 121 ENVKAPKSPRLTPPEFFRPNRSIDAFKDLSTVASKSECVVSTSLSPDKDSRVSV 180

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FT DISULFID 68 164 By similarity.
FT VARSPIC 175 203 DSRVSVTKPFMLPPVAASSLRNDSSNR -> G (in
FT isoform 2).
FT /FTid=VSP_006024.
FT CONFLICT 65 65 S -> P (in Ref. 1; AAK73366).
FT CONFLICT 171 171 S -> N (in Ref. 1; AAK73366).
FT CONFLICT 268 274 ERFQEV -> RESFKRCNCGFYHTVLSYLG (in Ref.
FT 1; AAK73366).
SQ SEQUENCE 274 AA; 31035 MW; 5AC1619014AE5E72 CRC64;

Query Match 80.4%; Score 1014.5; DB 1; Length 274;
Best Local Similarity 73.7%; Pred. No. 1.1e-71;
Matches 202; Conservative 20; Mismatches 23; Indels 29; Gaps 2;

Qy 1 MKKTQTWLTCTIYLLQLLFNPLVTEGICRRVTVNVDVTKLVANLPKDYMTILKYVPG 60
Db 1 MKKTQTWLTCTIYLLQLLFNPLVTEGICRRVTVNVDVTKLVANLPKDYMTILKYVPG 60

Qy 61 MDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLWIVDDLVCECKENSS 120
Db 61 MDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIDKLWIVDDLVCECKENSS 120

Qy 121 KDLKSKFKSPRLFTPEEFRIFNRSIDAFKDF-VVASETSDCVSSTLSPEKSG----- 174
Db 121 KDLKSKFKSPRLFTPEEFRIFNRSIDAFKDF-VVASETSDCVSSTLSPEKSG----- 174

Qy 121 ENVKSPKPNPRHFAPEDFRIFNRSIDALKOLETVASKTSECVLPSTLSPEKDSRVSV 180
Db 121 ENVKSPKPNPRHFAPEDFRIFNRSIDALKOLETVASKTSECVLPSTLSPEKDSRVSV 180

Qy 175 -----KAKNPFGSSSLHWAAMALPALPSLIIGFAPGALYWK 211
Db 175 -----KAKNPFGSSSLHWAAMALPALPSLIIGFAPGALYWK 211

Qy 181 TKPFMLPPVAASSLRNDSSNRKAANPLGDSNLQWAAAMALPAFFSLVIGFAPGALYWK 240
Db 181 TKPFMLPPVAASSLRNDSSNRKAANPLGDSNLQWAAAMALPAFFSLVIGFAPGALYWK 240

Qy 212 ROPSLTRAVENTIOINEEDNEISMLQEKEREQEV 245
Db 241 KOPNLTRTAENIQINEEDNEISMLQEKEREQEV 274

RESULT 11
Q68D22_HUMAN PRELIMINARY; PRT; 238 AA.
AC Q68D22;
DT 25-OCT-2004 (TRENBLrel. 28, Created)
DT 25-OCT-2004 (TRENBLrel. 28, Last sequence update)
DT 25-OCT-2004 (TRENBLrel. 28, Last annotation update)
DE Hypothetical protein DRFP686F2250.
GN Name=DRFP686F2250;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]_TaxID=9606;
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=AmYgdala;
RG The German cDNA Consortium;
RA Ottenwelder B., Obermaier B., Deutschenbaur S., Schallp A.,
RA Mewes H.W., Weil B., Amid C., Osanger A., Fobo G., Han M., Wiemann S.;
RL Submitted (AUG-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL; CR749222; CAH18078.1; -; mRNA.
DR SMR; Q68D22; 9-126.
DR GO; GO:0016020; C:membrane; IEA.
DR GO; GO:0005173; F:stem cell factor receptor binding; IEA.
DR GO; GO:0007155; P:cell adhesion; IEA.
DR InterPro; IPR003452; SCF.
DR Pfam; PF02404; SCF; 1.
KW Hypothetical protein.
SQ SEQUENCE 238 AA; 26667 MW; 7D6B1E487BE3709B CRC64;
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Query Match 79.6%; Score 1005; DB 2; Length 238;
Best Local Similarity 87.4%; Pred. No. 5.1e-71;
Matches 201; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

Qy 44 VANLPKDYMTILKYVPGMDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIDK 103
Db 9 VANLPKDYMTILKYVPGMDVLPCHWISWVQVLSLTDLLDKFSNISEGLSNYSIIDK 68
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Qy 104 LVNIVDDLVCECKENSSKDLKSKFKSPRLFTPEEFRIFNRSIDAFKDFVASETSDC 163
Db 69 LVNIVDDLVCECKENSSKDLKSKFKSPRLFTPEEFRIFNRSIDAFKDFVASETSDC 128

Qy 164 VVSSTLSPEKSG-----KAKNPFGSSSLHWAAMALPAL 195
Db 129 VVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSNRKAANPLGDSLSLHWAAMALPAL 188

Qy 196 FSLIIGFAPGALYWKQKQPSLTRAVENTIOINEEDNEISMLQEKEREQEV 245
Db 189 FSLIIGFAPGALYWKQKQPSLTRAVENTIOINEEDNEISMLQEKEREQEV 238

RESULT 12
SCF_RAT
ID - SCF RAT STANDARD; PRT; 273 AA.
AC P21581; Q9QWZ4; Q922E7;
DT 01-MAY-1991 (Rel. 18, Created)
DT 28-PEB-2003 (Rel. 41, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Kit ligand precursor (C-kit ligand) (Stem cell factor) (SCF) (Mast
DE cell growth factor) (MGF) (Hematopoietic growth factor KL).
GN Name=Kitlg; Synonyms=Mgf;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE (ISOFORMS 1 AND 2).
RA Teramoto T., Nagashima M., Thorgeirsson S.S.;
RL Submitted (JUN-1998) to the EMBL/GenBank/DBJ databases.
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-201, AND PARTIAL PROTEIN SEQUENCE.
RA MEDLINE=91004219; PubMed=2208279; DOI=10.1016/0092-8674(90)90301-T;
RA Martin F.H., Suggs S.V., Langley K.E., Lu H.S., Ting J., Okino K.H.,
RA Morris C.F., McNiece I.K., Jacobsen F.W., Mendiaz E.A., Birkett N.C.,
RA Smith K.A., Johnson M.J., Parker V.P., Flores J.C., Patel A.C.,
RA Fisher E.F., Erjavec H.O., Herrera C.J., Wypych J., Sachdev R.K.,
RA Pope J.A., Leslie I., Wen D., Lin C.-H., Cupples R.L., Zeebo K.M.;
RT "Primary structure and functional expression of rat and human stem
RT cell factor DNAs."
RL Cell 63:203-211(1990).
RN [3]
RP PROTEIN SEQUENCE OF 26-190, CARBOHYDRATE-LINKAGE SITES, AND DISULFIDE
RP BONDS.
RC STRAIN=Buffalo; TISSUE=Liver;
RX MEDLINE=91217037; PubMed=1708771;
RA Lu H.S., Clogston C.L., Wypych J., Fausset P.R., Lauren S.,
RA Mendiaz E.A., Zeebo K.M., Langley K.E.;
RT "Amino acid sequence and post-translational modification of stem cell
RT factor isolated from buffalo rat liver cell-conditioned medium."
RL J. Biol. Chem. 266:8102-8107(1991).
RN [4]
RP PROTEIN SEQUENCE OF 26-39.
RX MEDLINE=91004218; PubMed=2208278; DOI=10.1016/0092-8674(90)90300-4;
RA Zeebo K.M., Wypych J., McNiece I.K., Lu H.S., Smith K.A.,
RA Karakore S.B., Sachdev R.K., Yushchenko V.N., Birkett N.C.,
RA Williams L.R., Satyagal V.N., Tung W., Bosselman R.A., Mendiaz E.A.,
RA Langley K.E.;
RT "Identification, purification, and biological characterization of
RT hematopoietic stem cell factor from buffalo rat liver-conditioned
RT medium."
RL Cell 63:195-201(1990).
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to
CC augment the proliferation of both myeloid and lymphoid
CC hematopoietic progenitors in bone marrow culture. Mediates also
CC cell-cell adhesion. Acts synergistically with other cytokines,
CC probably interleukins.
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).
CC Also exists as a secreted soluble form (isoform 1 only) (By
```



RA Graw J., Neuhauser-Klaus A., Pretech W.;  
RT "Detection of a point mutation (A to G) in exon 5 of the murine Mgf  
RT gene defines a novel allele at the Steel locus with a weak  
RT phenotype.";  
RL Mutat. Res. 382:75-78 (1997).  
RN [8]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RC STRAIN=C57BL/6J; TISSUE=Cerebellum; DOI=10.1038/nature01266;  
RX MEDLINE=22354683; PubMed=12466851;  
RA Okazaki Y., Furuno M., Kasukawa T., Adachi J., Bono H., Kondo S.,  
RA Nikaide I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H.,  
RA Yagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojohori T.,  
RA Baldarelli R., Hill D.P., Bult C., Hume D.A., Quackenbush J.,  
RA Schriml L.M., Kanapin A., Matsuda H., Batalov S., Beisel K.W.,  
RA Blake J.A., Bradt D., Brusic V., Chothia C., Corbani L.E., Cousins S.,  
RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S.,  
RA Gaasterland T., Gariboldi M., Gissi C., Godzik A., Gough J.,  
RA Grimmond S., Gustincich S., Hirokawa N., Jackson I.J., Jarvis E.D.,  
RA Kanai A., Kawaji H., Kawasawa Y., Kedzierski R.M., King B.L.,  
RA Kanagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A.,  
RA Maglott D.R., Maitais L., Marchionni L., McKenzie L., Mikhi H.,  
RA Nagashima T., Numata K., Okido T., Pavan W.J., Pertea G., Pesole G.,  
RA Petrovsky N., Pillai R., Pontius J.U., Qi D., Ramachandran S.,  
RA Ravasi T., Reed J.C., Reed D.J., Reid J., Ring B.Z., Ringwald M.,  
RA Sandelin A., Schneider C., Semple C.A., Setou M., Shimada K.,  
RA Sultana R., Takenaka Y., Taylor M.S., Teasdale R.D., Tomita M.,  
RA Verardo R., Wagner L., Wahleschdt C., Wang Y., Watanabe Y., Wells C.,  
RA Wilming L.G., Wynshaw-Boris A., Yanagisawa M., Yang I., Yang L.,  
RA Yuan Z., Zavolan M., Zhu Y., Zimmer A., Carninci P., Hayatsu N.,  
RA Hirozane-Kishikawa T., Konno H., Nakamura M., Sakazume N., Sato K.,  
RA Shiraki T., Waki K., Kawai J., Aizawa K., Arakawa T., Fukuda S.,  
RA Hara A., Hashizume W., Imotani K., Ishii Y., Itoh M., Kagawa I.,  
RA Miyazaki A., Sakai K., Sasai K., Shibata K., Shinagawa A.,  
RA Yasunishi A., Yoshino M., Waterston R., Lander E.S., Rogers J.,  
RA Birney E., Hayashizaki Y.;  
RT "Analysis of the mouse transcriptome based on functional annotation of  
RT 60,770 full-length cDNAs.";  
RL Nature 420:563-573 (2002).  
RN [9]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1), AND VARIANT  
RP SER-207.  
RX MEDLINE=23388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
RA Diatchenko L., Marusina K., Farmer A., Rubin G.M., Hong L.,  
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
RA Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,  
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,  
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Rodriguez A.C., Grinwood J., Schmutz J., Myers R.M.,  
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,  
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;  
RT "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences.";  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
RN [10]  
RP NUCLEOTIDE SEQUENCE OF 1-270 (ISOFORM 1), AND PROTEIN SEQUENCE OF  
RP 26-65.  
RX MEDLINE=91004221; PubMed=1698557; DOI=10.1016/0092-8674(90)90303-V;  
RA Huang E., Nock K., Beier D.R., Chu T.Y., Buck J., Lahn H.W.,  
RA Wellner D., Leder P., Besmer P.;  
RT "The hematopoietic growth factor KL is encoded by the Sl locus and is  
RT the ligand of the c-kit receptor, the gene product of the W locus.";  
RL Cell 63:225-233 (1990).  
RN [11]  
RP NUCLEOTIDE SEQUENCE OF 1-201.

RX MEDLINE=91004220; PubMed=1698556; DOI=10.1016/0092-8674(90)90302-U;  
RA Zebo K.M., Williams D.A., Geissler E.N., Broudy V.C., Martin F.H.,  
RA Atkins H.L., Hsu R.-Y., Birkett N.C., Okino K.H., Murdock D.C.,  
RA Jacobsen F.W., Langley K.B., Smith K.A., Ikeishi T., Cattnach B.M.,  
RA Galli S.J., Suggs S.V.;  
RT "Stem cell factor is encoded at the Sl locus of the mouse and is the  
RT ligand for the c-kit tyrosine kinase receptor.";  
RL Cell 63:213-224 (1990).  
RN [12]  
RP PROTEIN SEQUENCE OF 26-53.  
RX MEDLINE=91004216; PubMed=1698554; DOI=10.1016/0092-8674(90)90298-S;  
RA Copeland N.G., Gilbert D.J., Cho B.C., Donovan P.J., Jenkins N.A.,  
RA Cosman D., Anderson D., Lyman S.D., Williams D.E.;  
RT "Mast cell growth factor maps near the steel locus on mouse chromosome  
RT 10 and is deleted in a number of steel alleles.";  
RL Cell 63:175-183 (1990).  
RN [13]  
RP PARTIAL PROTEIN SEQUENCE OF 26-78.  
RX MEDLINE=91004215; PubMed=1698553; DOI=10.1016/0092-8674(90)90297-R;  
RA Williams D.E., Eisenman J., Baird A., Rauch C., van Ness K.,  
RA March C.J., Park L.S., Martin U., Mochizuki D.Y., Boswell H.S.,  
RA Burgess G.S., Cosman D., Lyman S.D.;  
RT "Identification of a ligand for the c-kit proto-oncogene.";  
RL Cell 63:167-174 (1990).  
CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
CC augment the proliferation of both myeloid and lymphoid  
CC hematopoietic progenitors in bone marrow culture. Mediators also  
CC cell-cell adhesion. Acts synergistically with other cytokines,  
CC probably interleukins.  
CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).  
CC Also exists as a secreted soluble form (isoform 1 only) (By  
CC similarity).  
CC -!- ALTERNATIVE PRODUCTS:  
CC Event=Alternative splicing; Named isoforms=2;  
CC Name=1; Synonyms=KL-1;  
CC IsoId=P20826-1; Sequence=Displayed;  
CC Name=2; Synonyms=KL-2;  
CC IsoId=P20826-2; Sequence=VSP\_006023;  
CC -!- DEVELOPMENTAL STAGE: Acts in the early stages of hematopoiesis.  
CC -!- PTM: A soluble form is produced by proteolytic processing of  
CC isoform 1 in the extracellular domain.  
CC -!- SIMILARITY: Belongs to the SCF family.  
CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -  
CC the European Bioinformatics Institute. There are no restrictions on its  
CC use as long as its content is in no way modified and this statement is not  
CC removed.  
CC -----  
CC EMBL; M59915; AAA40095.1; -; mRNA.  
DR EMBL; M57647; AAA39538.1; -; mRNA.  
DR EMBL; S40534; AAB22555.2; -; mRNA.  
DR EMBL; X68989; CAA48778.1; -; mRNA.  
DR EMBL; U44724; -; NOT ANNOTATED CDS; Genomic\_DNA.  
DR EMBL; U44725; AAC52447.1; -; mRNA.  
DR EMBL; X95381; CAA64667.1; -; mRNA.  
DR EMBL; X99322; CAA67698.1; -; mRNA.  
DR EMBL; Y10287; CAA71329.1; -; mRNA.  
Query Match 78.5%; Score 991; DB 1; Length 273;  
Best Local Similarity 72.2%; Pred. No. 7,6e-70;  
Matches 197; Conservative 19; Mismatches 29; Indels 28; Gaps 1;  
QY 1 MKKTQTWLTCTYQLQLLFPNPLVKTGICRNVRNNTNNVKDVKLVANLPKQWMTLKYPG 60  
Db 1 MKKTQTWLTCTYQLQLLFPNPLVKTGICRNVRNNTNNVKDVKLVANLPKQWMTLKYPG 60  
QY 61 MDVLPSCWISGVVQLSDSLTDLIDKFSNISEGLSNYSIIDKLVINVDVDDVCEVKENSS 120  
Db 61 MDVLPSCWISGVVQLSDSLTDLIDKFSNISEGLSNYSIIDKLVINVDVDDVCEVKENAP 120  
QY 121 KDLKKSFKSPBPRFLTPTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKG----- 174

Db 121 KNKESPKRPTSPTEFFSIFNRSIDAFDFWASDTSVLSSTLGPEKDSRVSVT 180  
 QY 175 -----KAKNPGDSSLHWAAMALPALFSLIIGFAFGALYWKKK 212  
 Db 181 KPFMLPPVAASSLRNDSSSNRKAAPEDSGLOWTMALPALISLVIGFAFGALYWKKK 240  
 QY 213 QPSLTRAVENTIQUINEDNEISMLOKEREFOV 245  
 Db 241 QSSLTRAVENTIQUINEDNEISMLOKEREFOV 273

RESULT 14  
 SCF\_SHEEP STANDARD; PRT; 267 AA.  
 AC P79368; Q28591;  
 DT 28-FEB-2003 (Rel. 41, Created)  
 DT 28-FEB-2003 (Rel. 41, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Kit ligand precursor (C-kit ligand) (stem cell factor) (SCF) (Mast  
 cell growth factor) (MGP) (Fragment).  
 GN Name=KITLG; Synonyms=SCF;  
 OS Ovis aries (Sheep).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
 OC Pecora; Bovidae; Caprinae; Ovis.  
 OX NCBI\_TaxID=9940;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE OF 8-267.  
 RC TISSUE=Ovarian follicle;  
 RX MEDLINE=96413880; PubMed=8662240; DOI=10.1007/s003359900142;  
 RA Tisdall D.J., Quirke L.D., Galloway S.M.;  
 RT "Ovine stem cell factor gene is located within a syntenic group on  
 chromosome 3 conserved across mammalian species.";  
 RL Mamm. Genome 7:472-473 (1996).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE OF 1-202.  
 RX MEDLINE=9263397; PubMed=10328863; DOI=10.1006/cyto.1998.0430;  
 RA McInnes C.J., Deane D., Thomson J., Broad A., Haig D.M.;  
 RT "The cloning and expression of the cDNA for ovine stem cell factor  
 (kit-ligand) and characterization of its in vitro haematopoietic  
 activity.";  
 RL Cytokine 11:249-256(1999).  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
 augment the proliferation of both myeloid and lymphoid  
 hematopoietic progenitors in bone marrow culture. Mediates also  
 cell-cell adhesion. Acts synergistically with other cytokines,  
 probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (Probable).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein. Also exists as a  
 secreted soluble form (By similarity).  
 CC -!- PTM: A soluble form is produced by proteolytic processing of the  
 extracellular domain (By similarity).  
 CC -!- SIMILARITY: Belongs to the SCF family.  
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 CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
 between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 the European Bioinformatics Institute. There are no restrictions on its  
 use as long as its content is in no way modified and this statement is not  
 removed.  
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 DR EMBL; U89874; AAB49491.1; -; mRNA.  
 DR EMBL; Z50743; CAA90620.1; -; mRNA.  
 DR PIR; S58313; S58313.  
 DR SMR; P79368; 29-161.  
 DR InterPro; IPR012351; Cytokine\_4\_hlx.  
 DR InterPro; IPR003452; SCF.  
 DR PANTHER; PTHR11574; SCF; 1.  
 DR Pfam; PF02404; SCF; 1.  
 DR Cell adhesion; Glycoprotein; Growth factor; Signal; Transmembrane.  
 KW SIGNAL  
 FT CHAIN 26 >267  
 FT TOPO\_DOM 26 215  
 FT Extracellular (Potential).

FT TRANSMEM 216 238  
 FT TOPO\_DOM 239 >267  
 FT CARBOHYD 90  
 FT CARBOHYD 97  
 FT CARBOHYD 145  
 FT CARBOHYD 196  
 FT DISULFID 29  
 FT DISULFID 68  
 FT NON\_TER 267  
 SQ SEQUENCE 267 AA; 30149 MW; 9D9D959E4B9EC841 CRC64;  
 Query Match 78.5%; Score 990.5; DB 1; Length 267;  
 Best Local Similarity 74.2%; Pred. No. 8.2e-70;  
 Matches 198; Conservative 19; Mismatches 21; Indels 29; Gaps 2;  
 QY 1 MKKTQTWLTCTIYLLQLLFLNPLVKTGICRRNVNKNVNDVTKLVANLPKDYMTILKYVPG 60  
 Db 1 MKKTQTWLTCTIYLLQLLFLNPLVKTGICRRNVNKNVNDVTKLVANLPKDYMTILKYVPG 60  
 QY 61 MDVLPCHWISWVQVLSLTDLLKPSNISSEGLSNYSIIDKLVINVDLVECVKENS 120  
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 Db 241 QPSLTRAVENTIQUINEDNEISMLOK 267  
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 QY Q864L9 MACMU PRELIMINARY; PRT; 164 AA.  
 AC Q864L9;  
 DT 01-JUN-2003 (TRENBLRel. 24, Created)  
 DT 01-JUN-2003 (TRENBLRel. 24, Last sequence update)  
 DT 01-MAR-2004 (TRENBLRel. 26, Last annotation update)  
 DE SCF (Fragment).  
 OS Macaca mulatta (Rhesus macaque).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;  
 OC Cercopitheidae; Cercopitheinae; Macaca.  
 OX NCBI\_TaxID=9544;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Liver;  
 RA Gregoire A., Dorckel E., Morre M.;  
 RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.  
 CC -!- FUNCTION: Stimulates the proliferation of mast cells. Able to  
 augment the proliferation of both myeloid and lymphoid  
 hematopoietic progenitors in bone marrow culture. Mediates also  
 cell-cell adhesion. Acts synergistically with other cytokines,  
 probably interleukins (By similarity).  
 CC -!- SUBUNIT: Homodimer, non-covalently linked (By similarity).  
 CC -!- SUBCELLULAR LOCATION: Type I membrane protein (isoforms 1 and 2).  
 CC Also exists as a secreted soluble form (isoform 1 only) (By  
 similarity).  
 CC EMBL; AY247403; AAP03067.1; -; mRNA.  
 DR HSP; P21583; 18CF.  
 DR SMR; Q864L9; 4-136.  
 DR GO; GO:0016020; C:membrane; IEA.  
 DR GO; GO:0005173; F:stem cell factor receptor binding; IEA.  
 DR GO; GO:0007155; P:cell adhesion; IEA.  
 DR InterPro; IPR003452; SCF.  
 DR Pfam; PF02404; SCF; 1.  
 KW Cell adhesion; Transmembrane.  
 FT NON\_TER 1 1

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FT NON TER 164 164
SQ SEQUENCE 164 AA; 18430 MW; 6AFE3A568730110D CRC64;

Query Match      59.7%; Score 754; DB 2; Length 164;
Best Local Similarity 99.3%; Pred. No. 2e-51;
Matches 147; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 EGICRNRVTNNVKDVTKLAVNLPKDYMITLKYPGMDVLP SHCWISEMVVQLSDSLTDLL 60

Qy 86 DKFSNISEGLSNYSIIDKLAVNI VDDLVECVKENS KDKLKSFKSPPEPLFTPEEFFRIFN 145
Db 61 DKFSNISEGLSNYSIIDKLAVNI VDDLVECVKENS KDKLKSFKSPPEPLFTPEEFFRIFN 120

Qy 146 RSIDAFKDFVVASETSDCVSSTLSPEK 173
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEK 148
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Search completed: February 22, 2006, 18:19:22  
Job time : 127.212 secs



GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.  
OM protein - protein search, using sw model  
Run on: February 22, 2006, 18:19:42 ; Search time 29.697 Seconds  
(without alignments)  
682.074 Million cell updates/sec  
Title: US-10-620-642-63  
Perfect score: 1262  
Sequence: 1 MKKTQTWILTCIYLQLLFN.....NEEDNEISMLQEKERBQEV 245  
Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5  
Searched: 572060 seqs, 82675679 residues  
Total number of hits satisfying chosen parameters: 572060  
Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

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		2: /cgm2_6/ptodata/1/iaa/6 COMB.pap.*	
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		4: /cgm2_6/ptodata/1/iaa/PCTRUS COMB.pap.*	
		5: /cgm2_6/ptodata/1/iaa/RE COMB.pap.*	
		6: /cgm2_6/ptodata/1/iaa/backfiles1.pap.*	
		Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.	
		SUMMARIES	
Result No.	Score	Query Match Length DB ID	Description
1	1262	100.0 245 2	US-08-482-918-63 Sequence 63, Appl
2	1262	100.0 245 2	US-09-224-681-63 Sequence 63, Appl
3	1262	100.0 245 2	US-08-336-728A-63 Sequence 63, Appl
4	1262	100.0 245 2	US-09-635-251-63 Sequence 63, Appl
5	1262	100.0 245 2	US-09-224-683-63 Sequence 63, Appl
6	1262	100.0 245 2	US-09-604-325A-63 Sequence 63, Appl
7	1262	100.0 262 2	US-09-949-016-9391 Sequence 9391, Ap
8	1262	100.0 262 2	US-09-949-016-9392 Sequence 9392, Ap
9	1231	97.5 273 1	US-08-220-379B-2 Sequence 2, Appl
10	1231	97.5 273 1	US-08-628-428-9 Sequence 9, Appl
11	1231	97.5 273 2	US-08-482-918-49 Sequence 49, Appl
12	1231	97.5 273 2	US-08-482-918-61 Sequence 49, Appl
13	1231	97.5 273 2	US-09-224-681-49 Sequence 49, Appl
14	1231	97.5 273 2	US-09-224-681-61 Sequence 49, Appl
15	1231	97.5 273 2	US-08-336-728A-48 Sequence 48, Appl
16	1231	97.5 273 2	US-08-336-728A-49 Sequence 49, Appl
17	1231	97.5 273 2	US-08-336-728A-61 Sequence 49, Appl
18	1231	97.5 273 2	US-09-635-251-49 Sequence 49, Appl
19	1231	97.5 273 2	US-09-635-251-61 Sequence 49, Appl
20	1231	97.5 273 2	US-09-224-683-49 Sequence 49, Appl
21	1231	97.5 273 2	US-09-224-683-61 Sequence 49, Appl
22	1231	97.5 273 2	US-09-604-325A-49 Sequence 49, Appl
23	1231	97.5 273 2	US-09-604-325A-61 Sequence 49, Appl
24	1231	97.5 290 2	US-09-949-016-9393 Sequence 9393, Ap
25	1231	97.5 290 2	US-09-949-016-9394 Sequence 9394, Ap
26	1226	97.1 273 2	US-08-482-918-48 Sequence 48, Appl
27	1226	97.1 273 2	US-09-224-681-48 Sequence 48, Appl

US-08-482-918-63  
; Sequence 63, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Sugge, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA: US/08/482,918  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 63:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 245 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-482-918-63  
Query Match 100.0%; Score 1262; DB 2; Length 245;  
Best Local Similarity 100.0%; Pred. No. 3.3e-125;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

## ALIGNMENTS

RESULT 1  
US-08-482-918-63  
; Sequence 63, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Sugge, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA: US/08/482,918  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 63:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 245 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-482-918-63  
Query Match 100.0%; Score 1262; DB 2; Length 245;  
Best Local Similarity 100.0%; Pred. No. 3.3e-125;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWILTCIYLQLLFNPLVTEGICRNRVTNNVKDVKLVANLPKDYMTILKYVPG 60  
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Db 1 MKKTQTWILTCIYLQLLFNPLVTEGICRNRVTNNVKDVKLVANLPKDYMTILKYVPG 60  
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QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLNVIVDDDLVECKENSS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLNVIVDDDLVECKENSS 120  
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DB 121 KDLKSKFSKSPRLFTPEEFRIENRSIDAFKDFVASETSDCVVSSSTLSPEKGGKAKNPP 180  
QY 181 GDSSLHWAAMALPALFSLIIIGFAGALYWKQRQPSLTRAVENTIQINEEDNEISMLQEKER 240  
DB 181 GDSSLHWAAMALPALFSLIIIGFAGALYWKQRQPSLTRAVENTIQINEEDNEISMLQEKER 240  
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DB 241 EFQEV 245

RESULT 2  
US-09-224-681-63  
; Sequence 63, Application US/09224681  
; Patent No. 6207454  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene  
; TITLE OF INVENTION: Transfer with Stem Cell Factor (SCF) Polypeptide  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,681  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35199

; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX:  
; INFORMATION FOR SEQ ID NO: 63:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 245 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-224-681-63  
Query Match 100.0%; Score 1262; DB 2; Length 245;  
Best Local Similarity 100.0%; Pred. No. 3.3e-125;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWILTCTIYLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60  
DB 1 MKKTQTWILTCTIYLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYVPG 60  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLNVIVDDDLVECKENSS 120  
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISSEGLSNYSIIDKLNVIVDDDLVECKENSS 120  
QY 121 KDLKSKFSKSPRLFTPEEFRIENRSIDAFKDFVASETSDCVVSSSTLSPEKGGKAKNPP 180  
DB 121 KDLKSKFSKSPRLFTPEEFRIENRSIDAFKDFVASETSDCVVSSSTLSPEKGGKAKNPP 180  
QY 181 GDSSLHWAAMALPALFSLIIIGFAGALYWKQRQPSLTRAVENTIQINEEDNEISMLQEKER 240  
DB 181 GDSSLHWAAMALPALFSLIIIGFAGALYWKQRQPSLTRAVENTIQINEEDNEISMLQEKER 240  
QY 241 EFQEV 245  
DB 241 EFQEV 245

RESULT 3  
US-08-336-728A-63  
; Sequence 63, Application US/08336728A  
; Patent No. 6207802  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/336,728A  
; FILING DATE: 09-NOV-1994  
; CLASSIFICATION: 424  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/32956
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 63:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 245 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-336-728A-63

Query Match 100.0%; Score 1262; DB 2; Length 245;
Best Local Similarity 100.0%; Pred. No. 3.3e-125;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 61 MDVLPSCWISWMVQVLSDSLTLDDKFSNISSEGLSNYSIIDKLVIIVDDLVCEYKENS 120
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DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAveniQINEEDNEISMLQEKER 240
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RESULT 4
US-09-635-251-63
; Sequence 63, Application US/09635251
; Patent No. 6759215
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; Bosselman, Robert A.
; Suggs, Sidney V.
; Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/635,251
; FILING DATE: 07-Aug-2000

```

```

; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,182
; FILING DATE: 24-MAY-1995
; APPLICATION NUMBER: 08/172,329
; FILING DATE: 21-DEC-1993
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; APPLICATION NUMBER: 07/684,535
; FILING DATE: 04-OCT-1991
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/32957A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 63:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 245 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 63:
; US-09-635-251-63

Query Match 100.0%; Score 1262; DB 2; Length 245;
Best Local Similarity 100.0%; Pred. No. 3.3e-125;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRRNVTNNVKDVTKLVANLPKDYMITLKYVPG 60
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRRNVTNNVKDVTKLVANLPKDYMITLKYVPG 60
QY 61 MDVLPSCWISWMVQVLSDSLTLDDKFSNISSEGLSNYSIIDKLVIIVDDLVCEYKENS 120
DB 61 MDVLPSCWISWMVQVLSDSLTLDDKFSNISSEGLSNYSIIDKLVIIVDDLVCEYKENS 120
QY 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKGAKNPP 180
DB 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVVASETSDCVVSTLSPEKGAKNPP 180
QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAveniQINEEDNEISMLQEKER 240
DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAveniQINEEDNEISMLQEKER 240
QY 241 EFQEV 245
DB 241 EFQEV 245

RESULT 5
US-09-224-683-63
; Sequence 63, Application US/09224683
; Patent No. 6841147
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; Bosselman, Robert A.
; Suggs, Sidney V.
; Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

```

STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402

## COMPUTER READABLE FORM:

MEDIUM TYPE: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/224,683  
FILING DATE:

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/005,893  
FILING DATE: 12-JAN-1998

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/449,653  
FILING DATE: 24-MAY-1995

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002  
CLASSIFICATION: <unknown>

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002

## CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002

Qy 241 EFQEV 245  
Db 241 EFQEV 245

## RESULT 6

US-09-604-325A-63  
Sequence 63, Application US/09604325A  
Patent No. 6852313  
GENERAL INFORMATION:

APPLICANT: Zeebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.

TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104

CORRESPONDENCE ADDRESS:

ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois

COUNTRY: United States of America  
ZIP: 60606-6402

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

## CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/604,325A  
FILING DATE: 17-JUN-2002

## CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992

APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990

APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990

APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990

APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989

ATTORNEY/AGENT INFORMATION:

NAME: Clough, David W.

REGISTRATION NUMBER: 36,107

REFERENCE/DOCKET NUMBER: 01017/32953

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312/474-6300

TELEFAX: 312/474-0448

TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 63:

SEQUENCE CHARACTERISTICS:

LENGTH: 245 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 63:

US-09-604-325A-63

Query Match 100.0%; Score 1262; DB 2; Length 245;

Best Local Similarity 100.0%; Pred. No. 3.3e-125; Mismatches 0; Indels 0; Gaps 0;

Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYQLLLFNLVTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYPG 60

Db 1 MKKTQTWLTCTIYQLLLFNLVTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYPG 60

Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDFSNISSEGLSNYSIIDKLVNIYDDLVCEYKENS 120

Db 61 MDVLPSCWISSEMVVQLSDSLTDLDFSNISSEGLSNYSIIDKLVNIYDDLVCEYKENS 120

Qy 121 KDLKSKFSKPPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180

Db 121 KDLKSKFSKPPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180

Qy 121 KDLKSKFSKPPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180

Db 121 KDLKSKFSKPPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180

Qy 121 KDLKSKFSKPPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180

Db 121 KDLKSKFSKPPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSTLSPEKGAKNPP 180

Db 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 180  
Qy 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Db 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Qy 241 EFQEV 245  
Db 241 EFQEV 245

## RESULT 7

US-09-949-016-9391  
; Sequence 9391, Application US/09949016  
; Patent No. 6812339  
; GENERAL INFORMATION:  
; APPLICANT: VENTER, J. Craig et al.  
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
; FILE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
; FILE REFERENCE: CLO01307  
; CURRENT APPLICATION NUMBER: US/09/949,016  
; CURRENT FILING DATE: 2000-04-14  
; PRIOR APPLICATION NUMBER: 60/241,755  
; PRIOR FILING DATE: 2000-10-20  
; PRIOR APPLICATION NUMBER: 60/237,768  
; PRIOR FILING DATE: 2000-10-03  
; PRIOR APPLICATION NUMBER: 60/231,498  
; PRIOR FILING DATE: 2000-09-08  
; NUMBER OF SEQ ID NOS: 207012  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 9391  
; LENGTH: 262  
; TYPE: PRT  
; ORGANISM: Human  
US-09-949-016-9391

Query Match 100.0%; Score 1262; DB 2; Length 262;  
Best Local Similarity 100.0%; Pred. No. 3.7e-125;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRRRVTVNNVDVTKLVANLPKDYMITLKYPG 60  
Db 18 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRRRVTVNNVDVTKLVANLPKDYMITLKYPG 77  
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVKCKENSS 120  
Db 78 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVKCKENSS 137  
Qy 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 180  
Db 138 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 197  
Qy 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Db 198 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 257  
Qy 241 EFQEV 245  
Db 258 EFQEV 262

## RESULT 8

US-09-949-016-9392  
; Sequence 9392, Application US/09949016  
; Patent No. 6812339  
; GENERAL INFORMATION:  
; APPLICANT: VENTER, J. Craig et al.  
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
; FILE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
; FILE REFERENCE: CLO01307  
; CURRENT APPLICATION NUMBER: US/09/949,016  
; CURRENT FILING DATE: 2000-04-14

; PRIOR APPLICATION NUMBER: 60/241,755  
; PRIOR FILING DATE: 2000-10-20  
; PRIOR APPLICATION NUMBER: 60/237,768  
; PRIOR FILING DATE: 2000-10-03  
; PRIOR APPLICATION NUMBER: 60/231,498  
; PRIOR FILING DATE: 2000-09-08  
; NUMBER OF SEQ ID NOS: 207012  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 9392  
; LENGTH: 262  
; TYPE: PRT  
; ORGANISM: Human  
US-09-949-016-9392

Query Match 100.0%; Score 1262; DB 2; Length 262;  
Best Local Similarity 100.0%; Pred. No. 3.7e-125;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRRRVTVNNVDVTKLVANLPKDYMITLKYPG 60  
Db 18 MKKTQTWLTCTIYQLQLLFNPLVKTEGICRRRVTVNNVDVTKLVANLPKDYMITLKYPG 77  
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVKCKENSS 120  
Db 78 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISEGLSNYSIIDKLVNIVDDLVKCKENSS 137  
Qy 121 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 180  
Db 138 KDLKSKSPKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 197  
Qy 181 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 240  
Db 198 GDSSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENIQINEEDNEISMLQEKER 257  
Qy 241 EFQEV 245  
Db 258 EFQEV 262

## RESULT 9

US-08-220-379B-2  
; Sequence 2, Application US/08220379B  
; Patent No. 5525708  
; GENERAL INFORMATION:  
; APPLICANT: No. 5525708ka, Karl  
; APPLICANT: Lobell, Robert B  
; TITLE OF INVENTION: STABILIZED DIMER OF KIT LIGAND  
; NUMBER OF SEQUENCES: 7  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Fish & Neave  
; STREET: 1251 Avenue of the Americas  
; CITY: New York  
; STATE: New York  
; COUNTRY: United States of America  
; ZIP: 10020  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/220,379B  
; FILING DATE: 28-MAR-1994  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Haley Jr, James F  
; REGISTRATION NUMBER: 27,794  
; REFERENCE/DOCKET NUMBER: CytMed/2  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 212-596-9000  
; TELEFAX: 212-596-9090  
; INFORMATION FOR SEQ ID NO: 2:  
; SEQUENCE CHARACTERISTICS:

;  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: cleavage site  
; LOCATION: 164..165  
US-08-220-379B-2

Query Match 97.5%; Score 1231; DB 1; Length 273;  
Best Local Similarity 89.4%; Pred. No. 7.5e-122;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
  
QY 1 MKKTQTWLTCTIYQLLLFNPVLVTEGICRRNRVTNNVKDVKLVANLPKDYMTILKYVPG 60  
Db 1 MKKTQTWLTCTIYQLLLFNPVLVTEGICRRNRVTNNVKDVKLVANLPKDYMTILKYVPG 60  
  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
  
QY 121 KDLKSKFSKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSTLSPEKSG----- 174  
Db 121 KDLKSKFSKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSTLSPEKSGSRVSVT 180  
  
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 245  
Db 181 KPFMLPPVAASLSRNDSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 240  
  
QY 213 QPSLTRAVENTIQTNEEDNEISMLQEKEREFOEV 245  
Db 241 QPSLTRAVENTIQTNEEDNEISMLQEKEREFOEV 273

RESULT 10  
US-08-628-428-9  
; Sequence 9, Application US/08628428  
; Patent No. 5885962  
; GENERAL INFORMATION:  
; APPLICANT: Lu, Hsieng  
; TITLE OF INVENTION: SCF ANALOG COMPOSITIONS AND METHODS  
; NUMBER OF SEQUENCES: 9  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Amgen Inc.  
; STREET: 1840 DeHavilland Drive  
; CITY: Thousand Oaks  
; STATE: CA  
; COUNTRY: USA  
; ZIP: 91320-1789  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/628,428  
; FILING DATE: 05-APR-1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Knight, Matthew W  
; REGISTRATION NUMBER: 36,846  
; REFERENCE/DOCKET NUMBER: A-400  
; INFORMATION FOR SEQ ID NO: 9:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..273  
; OTHER INFORMATION: /note= "NOTE: Mature full length

;  
; OTHER INFORMATION: 1-248 SCF protein begins at amino acid 26; amino acid 1-25  
; OTHER INFORMATION: include Met and leader sequences for membrane band form of hu  
; OTHER INFORMATION: recombinant SCF."  
US-08-628-428-9

Query Match 97.5%; Score 1231; DB 1; Length 273;  
Best Local Similarity 89.4%; Pred. No. 7.5e-122;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
  
QY 1 MKKTQTWLTCTIYQLLLFNPVLVTEGICRRNRVTNNVKDVKLVANLPKDYMTILKYVPG 60  
Db 1 MKKTQTWLTCTIYQLLLFNPVLVTEGICRRNRVTNNVKDVKLVANLPKDYMTILKYVPG 60  
  
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
  
QY 121 KDLKSKFSKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSTLSPEKSG----- 174  
Db 121 KDLKSKFSKSPRLFTPEEFRIFNRSIDAFKDFVASETSDCVVSTLSPEKSGSRVSVT 180  
  
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 245  
Db 181 KPFMLPPVAASLSRNDSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAPGALYWK 240  
  
QY 213 QPSLTRAVENTIQTNEEDNEISMLQEKEREFOEV 245  
Db 241 QPSLTRAVENTIQTNEEDNEISMLQEKEREFOEV 273

RESULT 11  
US-08-482-918-49  
; Sequence 49, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Krisztina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-482-918-49

Query Match 97.5%; Score 1231; DB 2; Length 273;  
Best Local Similarity 89.4%; Pred. No. 7.5e-122;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTOTWILTCIYLOLLFNPVLKTEGICRNRVTNNVDVTKLVANLPRKDYMITLKYVPG 60  
DB 1 MKKTOTWILTCIYLOLLFNPVLKTEGICRNRVTNNVDVTKLVANLPRKDYMITLKYVPG 60

QY 61 MDVLFCHWISWVQVQSDSLDLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENSS 120  
DB 61 MDVLFCHWISWVQVQSDSLDLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENSS 120

QY 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKGV 174  
DB 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKGV 174

QY 175 -----KAKNPPGDSSHLHWAAMALPALFSLIIGFAFGALYWKCR 240  
DB 175 -----KAKNPPGDSSHLHWAAMALPALFSLIIGFAFGALYWKCR 240

QY 213 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 245  
DB 213 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 245

QY 241 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 273  
DB 241 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 273

RESULT 12  
US-08-482-918-61  
; Sequence 61, Application US/08482918  
; Patent No. 6207417  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/482,918  
; FILING DATE: 07-JUN-1995  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/33005  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: 25-3856  
; INFORMATION FOR SEQ ID NO: 61:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-08-482-918-61

Query Match 97.5%; Score 1231; DB 2; Length 273;  
Best Local Similarity 89.4%; Pred. No. 7.5e-122;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTOTWILTCIYLOLLFNPVLKTEGICRNRVTNNVDVTKLVANLPRKDYMITLKYVPG 60  
DB 1 MKKTOTWILTCIYLOLLFNPVLKTEGICRNRVTNNVDVTKLVANLPRKDYMITLKYVPG 60

QY 61 MDVLFCHWISWVQVQSDSLDLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENSS 120  
DB 61 MDVLFCHWISWVQVQSDSLDLDKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENSS 120

QY 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKGV 174  
DB 121 KDLKSFSPKSPRLPTPEFFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKGV 174

QY 175 -----KAKNPPGDSSHLHWAAMALPALFSLIIGFAFGALYWKCR 240  
DB 175 -----KAKNPPGDSSHLHWAAMALPALFSLIIGFAFGALYWKCR 240

QY 213 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 245  
DB 213 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 245

QY 241 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 273  
DB 241 QPSLTRAVENTIQUINEDNEISMLOEKEREFOEV 273

RESULT 13  
US-09-224-681-49  
; Sequence 49, Application US/09224681  
; Patent No. 6207454  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,681  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:

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; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX:
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-224-681-49

Query Match          97.5%; Score 1231; DB 2; Length 273;
Best Local Similarity 89.4%; Pred. No. 7.5e-122;
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIYDDLVKCVKENS 120
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIYDDLVKCVKENS 120
QY 121 KDLKSFKSPRLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKG----- 174
DB 121 KDLKSFKSPRLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIIGFAGFALYWKRR 212
DB 181 KPFMLPPVAASSLRNDSNNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGFALYWKRR 240
QY 213 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 245
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

RESULT 14
US-09-224-681-61
; Sequence 61, Application US/09224681
; Patent No. 6207454
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Method for Enhancing the Efficiency of Gene
; TITLE OF INVENTION: Transfer with Stem Cell Factor (SCF) Polypeptide
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/224,681
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/005,893
; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX:
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-224-681-61

Query Match          97.5%; Score 1231; DB 2; Length 273;
Best Local Similarity 89.4%; Pred. No. 7.5e-122;
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIYDDLVKCVKENS 120
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDFKFSNISEGLSNYSIIDKLVNIYDDLVKCVKENS 120
QY 121 KDLKSFKSPRLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKG----- 174
DB 121 KDLKSFKSPRLPTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIIGFAGFALYWKRR 212
DB 181 KPFMLPPVAASSLRNDSNNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGFALYWKRR 240
QY 213 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 245
DB 241 QPSLTRAVENTQINEEDNEISMLOEKEREFOEV 273

RESULT 15
US-08-336-728A-48
; Sequence 48, Application US/08336728A
; Patent No. 6207802
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
```



STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/336,728A  
FILING DATE: 09-NOV-1994  
CLASSIFICATION: 424  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32956  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-336-728A-48

Query Match 97.5%; Score 1231; DB 2; Length 273;  
Best Local Similarity 89.4%; Pred. No. 7.5e-122; Mismatches 1; Indels 28; Gaps 1;  
Matches 244; Conservative 0;

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Db	1	MKKTQTWLTCTIYLQLLFNPLVKTEGICRNRVTNNVKDVTKLVANLPKDYMITLKYYPG	60
Qy	61	MDVLPSCWISVMVQLSDSLTDLIDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS	120
Db	61	MDVLPSCWISVMVQLSDSLTDLIDKFSNISEGLSNYSIIDKLVNIIVDDLVECVKENS	120
Qy	121	KDKKSPKSPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKG-----	174
Db	121	KDKKSPKSPRLFTPEFFRIFNRSIDAFKDFVASETSDCVVSTLSPEKDSRVSVT	180
Qy	175	-----KAKNPPGDSLSLHWAAMALPALFSLIIIGFAGFALYWKKR	212
Db	181	KPFMLPPVAASLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIIGFAGFALYWKKR	240
Qy	213	QPSLTRAveniQINEEDNEISMLOKEREFEV	245
Db	241	QPSLTRAveniQINEEDNEISMLOKEREFEV	273

Search completed: February 22, 2006, 18:21:59  
Job time : 29.697 secs

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GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:20:42 ; Search time 97.865 Seconds  
(without alignments)  
1046.014 Million cell updates/sec

Title: US-10-620-642-63

Perfect score: 1262

Sequence: 1 MKKTQTWLTCTIYLQLLFN.....NEEDNEISMLQEKREPFQEV 245

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications\_AA\_Main:  
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2: /cgm2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep.\*  
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6: /cgm2\_6/ptodata/1/pubpaa/US11\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

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1	1262	100.0	245	3	US-09-005-243-63 Sequence 63, Appl
2	1262	100.0	245	3	US-09-224-683-63 Sequence 63, Appl
3	1262	100.0	245	3	US-10-175-608-63 Sequence 63, Appl
4	1262	100.0	245	5	US-10-688-845-87 Sequence 87, Appl
5	1262	100.0	245	5	US-10-620-642-63 Sequence 63, Appl
6	1231	97.5	273	3	US-09-005-243-49 Sequence 49, Appl
7	1231	97.5	273	3	US-09-005-243-61 Sequence 61, Appl
8	1231	97.5	273	3	US-09-224-683-49 Sequence 49, Appl
9	1231	97.5	273	3	US-09-224-683-61 Sequence 61, Appl
10	1231	97.5	273	4	US-10-175-608-49 Sequence 49, Appl
11	1231	97.5	273	4	US-10-175-608-61 Sequence 61, Appl
12	1231	97.5	273	5	US-10-620-642-49 Sequence 49, Appl
13	1231	97.5	273	5	US-10-620-642-61 Sequence 61, Appl
14	1226	97.1	273	3	US-09-005-243-48 Sequence 48, Appl
15	1226	97.1	273	3	US-09-224-683-48 Sequence 48, Appl
16	1226	97.1	273	4	US-10-175-608-48 Sequence 48, Appl
17	1226	97.1	273	5	US-10-620-642-48 Sequence 48, Appl
18	1215	96.3	273	3	US-09-005-243-50 Sequence 50, Appl
19	1215	96.3	273	3	US-09-224-683-50 Sequence 50, Appl
20	1215	96.3	273	4	US-10-175-608-50 Sequence 50, Appl
21	1215	96.3	273	5	US-10-620-642-50 Sequence 50, Appl
22	1070.5	84.8	266	3	US-09-005-243-57 Sequence 57, Appl
23	1070.5	84.8	266	3	US-09-224-683-57 Sequence 57, Appl
24	1070.5	84.8	266	4	US-10-175-608-57 Sequence 57, Appl
25	1070.5	84.8	266	5	US-10-620-642-57 Sequence 57, Appl
26	1020.5	80.9	271	3	US-09-005-243-52 Sequence 52, Appl
27	1020.5	80.9	271	3	US-09-224-683-52 Sequence 52, Appl

28	1020.5	80.9	271	4	US-10-175-608-52 Sequence 52, Appl
29	1020.5	80.9	271	5	US-10-620-642-52 Sequence 52, Appl
30	1014.5	80.4	274	3	US-09-005-243-51 Sequence 51, Appl
31	1014.5	80.4	274	3	US-09-224-683-51 Sequence 51, Appl
32	1014.5	80.4	274	4	US-10-175-608-51 Sequence 51, Appl
33	1014.5	80.4	274	5	US-10-620-642-51 Sequence 51, Appl
34	1007	79.8	273	3	US-09-005-243-53 Sequence 53, Appl
35	1007	79.8	273	3	US-09-224-683-53 Sequence 53, Appl
36	1007	79.8	273	4	US-10-175-608-53 Sequence 53, Appl
37	1007	79.8	273	5	US-10-620-642-53 Sequence 53, Appl
38	992	78.6	273	3	US-09-005-243-42 Sequence 42, Appl
39	992	78.6	273	3	US-09-224-683-42 Sequence 42, Appl
40	992	78.6	273	4	US-10-175-608-42 Sequence 42, Appl
41	992	78.6	273	5	US-10-620-642-42 Sequence 42, Appl
42	991	78.5	273	3	US-09-005-243-55 Sequence 55, Appl
43	991	78.5	273	3	US-09-224-683-55 Sequence 55, Appl
44	991	78.5	273	4	US-10-132-345-4 Sequence 4, Appl
45	991	78.5	273	4	US-10-175-608-55 Sequence 55, Appl

## ALIGNMENTS

### RESULT 1

US-09-005-243-63  
; Sequence 63, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zsebo, Krisztina M.  
; APPLICANT: Bosseiman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465

```

; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 63:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 245 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-005-243-63

Query Match 100.0%; Score 1262; DB 3; Length 245;
Best Local Similarity 100.0%; Pred. No. 5.6e-114;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVKDVTKLVANLPKDYMITLKYPVG 60

QY 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISGLSNYSIIDKLVINIYDDLVKCKENSS 120
DB 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISGLSNYSIIDKLVINIYDDLVKCKENSS 120

QY 121 KDLKSKPKSPRLFTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKKGAKNPP 180
DB 121 KDLKSKPKSPRLFTPEEPFRIFNRSIDAFKDFVVASETSDCVVSSSTLSPEKKGAKNPP 180

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DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVERNIIQINEEDNEISMLOEKER 240

QY 241 EFQEV 245
DB 241 EFQEV 245

RESULT 2
US-09-224-683-63
; Sequence 63, Application US/09224683
; Patent No. US20020031491A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/224,683
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/005,893
; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/175,608
; FILING DATE: 16-Oct-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/635,249
; FILING DATE: 07-AUG-2000
; APPLICATION NUMBER: 09/486,546
; FILING DATE: 24-MAY-1995
; APPLICATION NUMBER: 08/172,329
; FILING DATE: 21-DEC-1993
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
; APPLICATION NUMBER: 07/684,535
; FILING DATE: 10-APR-1991
; APPLICATION NUMBER: 09/589,701
; FILING DATE: 10-OCT-1991
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35199
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 63:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 245 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 63:
US-10-175-608-63

Query Match 100.0%; Score 1262; DB 4; Length 245;
Best Local Similarity 100.0%; Pred. No. 5.6e-114;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MKKTQTWLTCTIYLQLLFPNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYPG 60
QY 61 MDVLPSCWISWMVQVLSLTDLLDFSNISSEGLSNYSIIDKLVNIVDDLVCEVKENS 120
DB 61 MDVLPSCWISWMVQVLSLTDLLDFSNISSEGLSNYSIIDKLVNIVDDLVCEVKENS 120
QY 121 KDLKSKFSPRLFTPEEFRIFRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180
DB 121 KDLKSKFSPRLFTPEEFRIFRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180
QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAveniQINEEDNEISMLQEKER 240
DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAveniQINEEDNEISMLQEKER 240
QY 241 EFQEV 245
DB 241 EFQEV 245

RESULT 4
US-10-688-845-87
; Sequence 87, Application US/1068845
```

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; Publication No. US20040247578A1
; GENERAL INFORMATION:
; APPLICANT: Lotze, Michael T
; APPLICANT: Tahara, Hideaki
; TITLE OF INVENTION: Methods And Reagents For Inducing Immunity
; FILE REFERENCE: UPT-004
; CURRENT APPLICATION NUMBER: US/10/688,845
; CURRENT FILING DATE: 2003-10-15
; PRIOR APPLICATION NUMBER: 60/418,865
; NUMBER OF SEQ ID NOS: 87
; SOFTWARE: Patent In version 3.1
; SEQ ID NO 87
; LENGTH: 245
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-688-845-87

Query Match 100.0%; Score 1262; DB 5; Length 245;
Best Local Similarity 100.0%; Pred. No. 5.6e-114;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYLQLLFPNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYPG 60
DB 1 MKKTQTWLTCTIYLQLLFPNPLVKTGICRNRVTNNVKDVKLVANLPKDYMITLKYPG 60
QY 61 MDVLPSCWISWMVQVLSLTDLLDFSNISSEGLSNYSIIDKLVNIVDDLVCEVKENS 120
DB 61 MDVLPSCWISWMVQVLSLTDLLDFSNISSEGLSNYSIIDKLVNIVDDLVCEVKENS 120
QY 121 KDLKSKFSPRLFTPEEFRIFRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180
DB 121 KDLKSKFSPRLFTPEEFRIFRSIDAFKDFVVASETSDCVVSSSTLSPEKGAKNPP 180
QY 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAveniQINEEDNEISMLQEKER 240
DB 181 GDSSLHWAAMALPALFSLIIGFAGALYWKQKQPSLTRAveniQINEEDNEISMLQEKER 240
QY 241 EFQEV 245
DB 241 EFQEV 245

RESULT 5
US-10-620-642-63
; Sequence 63, Application US/10620642
; Publication No. US20050080250A1
; GENERAL INFORMATION:
; APPLICANT: Zeebo, Kristina M.
; Bosselman, Robert A.
; Suggs, Sidney V.
; Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/620,642
; FILING DATE: 16-Jul-2003
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/10/175,608
; FILING DATE: 16-Oct-2002
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APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 09/589,701  
FILING DATE: 10-OCT-1991  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 63:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 245 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 63:  
US-10-620-642-63

Query Match 100.0%; Score 1262; DB 5; Length 245;  
Best Local Similarity 100.0%; Pred. No. 5.6e-114; Indels 0; Gaps 0;  
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120  
QY 121 KDLKSKFSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 180  
DB 121 KDLKSKFSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 180  
QY 181 GDSSLHWAAMALPALFSLIIGFAFGALYWKRPQSLTRAVENIQINEEDNEISMLOEKER 240  
DB 181 GDSSLHWAAMALPALFSLIIGFAFGALYWKRPQSLTRAVENIQINEEDNEISMLOEKER 240  
QY 241 EFQEV 245  
DB 241 EFQEV 245

## RESULT 6

US-09-005-243-49  
Sequence 49, Application US/09005243  
Patent No. US2002018763A1  
GENERAL INFORMATION:  
APPLICANT: Zsebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/005,243  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/449,653  
FILING DATE: 24-MAY-1995  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/34465  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 49:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-005-243-49

Query Match 97.5%; Score 1231; DB 3; Length 273;

Best Local Similarity 89.4%; Pred. No. 6.7e-111;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
DB 1 MKKTQTWLTTCIYLQLLFPNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60  
QY 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120  
DB 61 MDVLPSCWISWVQVLSLTLDDKFSNISEGLSNYSIIDKLVNIYVDDLVECVKENS 120  
QY 121 KDLKSKFSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 174  
DB 121 KDLKSKFSPRLFTPEEPRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKGAKNPP 174  
QY 175 -----KAKNPGDSSLHWAAMALPALFSLIIGFAFGALYWKRPQSLTRAVENIQINEEDNEISMLOEKER 212  
DB 181 KPFMLPVAASSLRNDSSSNRKNKPNPGDSSLHWAAMALPALFSLIIGFAFGALYWKRPQSLTRAVENIQINEEDNEISMLOEKER 240  
QY 213 QPSLTRAVENTIQINEEDNEISMLOEKER 245  
DB 241 QPSLTRAVENTIQINEEDNEISMLOEKER 273

## RESULT 7

US-09-005-243-61  
; Sequence 61, Application US/09005243  
; Patent No. US20020018763A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/005,243  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/34465  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELETYPE: 25-3856  
; INFORMATION FOR SEQ ID NO: 61:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
US-09-005-243-61

Query Match 97.5%; Score 1231; DB 3; Length 273;

Best Local Similarity 89.4%; Pred. No. 6.7e-111;

Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTOTWLTCTYLLQLLFNPVKTGICRNRYNNVNDVTKLVANLPKDYMITLKYPG 60

Db 1 MKKTOTWLTCTYLLQLLFNPVKTGICRNRYNNVNDVTKLVANLPKDYMITLKYPG 60

QY 61 MDVLPSCWISWMVQLSDSLTDLDFNSISEGLSNYSIIDKLVNIVDDLVCEVKENSS 120

Db 61 MDVLPSCWISWMVQLSDSLTDLDFNSISEGLSNYSIIDKLVNIVDDLVCEVKENSS 120  
QY 121 KDLKSKFSKSPRLFTPEFRFNRSIDAPKDFVVASETSDCVVSSSTLSPEKG----- 174  
Db 121 KDLKSKFSKSPRLFTPEFRFNRSIDAPKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 212  
Db 181 KPFMLPPVAASSLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 213 QPSLTRAVENTQINEEDNEISMLQEKREPOEV 245  
Db 241 QPSLTRAVENTQINEEDNEISMLQEKREPOEV 273

## RESULT 8

US-09-224-683-49  
; Sequence 49, Application US/09224683  
; Patent No. US20020031491A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; APPLICANT: Bosselman, Robert A.  
; APPLICANT: Suggs, Sidney V.  
; APPLICANT: Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; CITY: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/09/224,683  
; FILING DATE:  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 09/005,893  
; FILING DATE: 12-JAN-1998  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 08/449,653  
; FILING DATE: 24-MAY-1995  
; CLASSIFICATION:  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-NOV-1992  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/589,701  
; FILING DATE: 01-OCT-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-AUG-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-JUN-1990  
; PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-OCT-1989  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35136  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448

```
;
;
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 49:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-224-683-49

Query Match          97.5%; Score 1231; DB 3; Length 273;
Best Local Similarity 89.4%; Pred. No. 6.7e-111;
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

Qy 1 MKKTQTWILTCIYLQLLFNPLVTEGICRNRVTNNVKDVKLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTWILTCIYLQLLFNPLVTEGICRNRVTNNVKDVKLVANLPKDYMITLKYPVG 60
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISGLSNYSIIDKLVNIIVDDLVKVCNKSS 120
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISGLSNYSIIDKLVNIIVDDLVKVCNKSS 120
Qy 121 KDLKSPKSPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKG----- 174
Db 121 KDLKSPKSPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
Qy 175 -----KAKNPPGDSLSLHWAALPALFSLIIGFAGFALYWKKR 212
Db 181 KPFLPPVAAASSLRNDSRSSNRKAKNPPGDSLSLHWAALPALFSLIIGFAGFALYWKKR 240
Qy 213 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 245
Db 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273

RESULT 9
US-09-224-683-61
; Sequence 61, Application US/09224683
; Patent No. US20020031491A1
; GENERAL INFORMATION:
; APPLICANT: Zsebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor: Composition Claims
; CORRESPONDENCE ADDRESS:
; NUMBER OF SEQUENCES: 104
; ADDRESSSE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/224,683
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/005,893
; FILING DATE: 12-JAN-1998
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/449,653
; FILING DATE: 24-MAY-1995
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/982,255
; FILING DATE: 25-NOV-1992
```

```
;
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/589,701
; FILING DATE: 01-OCT-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/573,616
; FILING DATE: 24-AUG-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/537,198
; FILING DATE: 11-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/422,383
; FILING DATE: 16-OCT-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Clough, David W.
; REGISTRATION NUMBER: 36,107
; REFERENCE/DOCKET NUMBER: 01017/35136
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/474-6300
; TELEFAX: 312/474-0448
; TELEX: 25-3856
; INFORMATION FOR SEQ ID NO: 61:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 273 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-224-683-61

Query Match          97.5%; Score 1231; DB 3; Length 273;
Best Local Similarity 89.4%; Pred. No. 6.7e-111;
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

Qy 1 MKKTQTWILTCIYLQLLFNPLVTEGICRNRVTNNVKDVKLVANLPKDYMITLKYPVG 60
Db 1 MKKTQTWILTCIYLQLLFNPLVTEGICRNRVTNNVKDVKLVANLPKDYMITLKYPVG 60
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISGLSNYSIIDKLVNIIVDDLVKVCNKSS 120
Db 61 MDVLPSCWISSEMVVQLSDSLTDLDDKFSNISGLSNYSIIDKLVNIIVDDLVKVCNKSS 120
Qy 121 KDLKSPKSPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKG----- 174
Db 121 KDLKSPKSPRLFTPEEPFRIFNRSIDAFKDFVASETSDCVVSSSTLSPEKDSRVSVT 180
Qy 175 -----KAKNPPGDSLSLHWAALPALFSLIIGFAGFALYWKKR 212
Db 181 KPFLPPVAAASSLRNDSRSSNRKAKNPPGDSLSLHWAALPALFSLIIGFAGFALYWKKR 240
Qy 213 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 245
Db 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273

RESULT 10
US-10-175-608-49
; Sequence 49, Application US/10175608
; Publication No. US20040181044A1
; GENERAL INFORMATION:
; APPLICANT: Zsebo, Kristina M.
; APPLICANT: Bosselman, Robert A.
; APPLICANT: Suggs, Sidney V.
; APPLICANT: Martin, Francis H.
; TITLE OF INVENTION: Stem Cell Factor
; NUMBER OF SEQUENCES: 104
; CORRESPONDENCE ADDRESS:
; ADDRESSSE: Marshall, O'Toole, Gerstein, Murray & Borun
; STREET: 6300 Sears Tower, 233 South Wacker Drive
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60606-6402
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
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COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/175,608  
FILING DATE: 16-Oct-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 09/589,701  
FILING DATE: 10-OCT-1991  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 49:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-10-175-608-49

Query Match 97.5%; Score 1231; DB 4; Length 273;  
Best Local Similarity 89.4%; Pred. No. 6.7e-111;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKSPKSPRLPTPEFFRIFNRSIDAFKDFVVASETSDCVSVSTLSPEKG----- 174  
DB 121 KDLKSKSPKSPRLPTPEFFRIFNRSIDAFKDFVVASETSDCVSVSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPDDSSLHWAAMALPALFSLIIGFAPGALYWKCR 212  
DB 181 KPPMLPPVAASSLRNDSNNKAKNPPGDSLHWAAMALPALFSLIIGFAPGALYWKCR 240  
QY 213 QPSLTRAVENTIQUEDNEISMLOKEREFOEV 245  
DB 241 QPSLTRAVENTIQUEDNEISMLOKEREFOEV 273

RESULT 11  
US-10-175-608-61  
; Sequence 61, Application US/10175608  
; Publication No. US20040181044A1

GENERAL INFORMATION:  
APPLICANT: Zsebo, Kristina M.  
Bosselman, Robert A.  
Suggs, Sidney V.  
Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESS: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/175,608  
FILING DATE: 16-Oct-2002  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 09/635,249  
FILING DATE: 07-AUG-2000  
APPLICATION NUMBER: 09/486,546  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 09/589,701  
FILING DATE: 10-OCT-1991  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 61:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-10-175-608-61  
Query Match 97.5%; Score 1231; DB 4; Length 273;  
Best Local Similarity 89.4%; Pred. No. 6.7e-111;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
QY 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPG 60  
DB 1 MKKTQTWLTCTIYQLQLLFPNPLVKTGICRNRVTNNVDVTKLVANLPKDYMITLKYPG 60  
QY 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
DB 61 MDVLPSCWISWMVQVLSLTDLLDKFSNISSEGLSNYSIIDKLVNIIVDDLVECVKENS 120  
QY 121 KDLKSKSPKSPRLPTPEFFRIFNRSIDAFKDFVVASETSDCVSVSTLSPEKG----- 174

Db 121 KDLKSKFKSPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSSLTSPKDSRVSVT 180  
Qy 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 212  
Db 181 KPFMLPPVVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
Qy 213 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 245  
Db 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273

## RESULT 12

US-10-620-642-49  
; Sequence 49, Application US/10620642  
; Publication No. US20050080250A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; City: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402

COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/620,642  
; FILING DATE: 16-Jul-2003  
; CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/10/175,608  
; FILING DATE: 16-Oct-2002  
; APPLICATION NUMBER: 09/635,249  
; FILING DATE: 07-Aug-2000  
; APPLICATION NUMBER: 09/486,546  
; FILING DATE: 24-May-1995  
; APPLICATION NUMBER: 08/172,329  
; FILING DATE: 21-Dec-1993  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-Nov-1992  
; APPLICATION NUMBER: 07/684,535  
; FILING DATE: 10-Apr-1991  
; APPLICATION NUMBER: 09/589,701  
; FILING DATE: 10-Oct-1991  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-Aug-1990  
; APPLICATION NUMBER: 07/537,198  
; FILING DATE: 11-Jun-1990  
; APPLICATION NUMBER: 07/422,383  
; FILING DATE: 16-Oct-1989

ATTORNEY/AGENT INFORMATION:  
; NAME: Clough, David W.  
; REGISTRATION NUMBER: 36,107  
; REFERENCE/DOCKET NUMBER: 01017/35199  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 312/474-6300  
; TELEFAX: 312/474-0448  
; TELEX: <Unknown>  
; INFORMATION FOR SEQ ID NO: 49:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 273 amino acids  
; TYPE: amino acid  
; STRANDEDNESS: single  
; TOPOLOGY: linear

; MOLECULE TYPE: protein  
; SEQUENCE DESCRIPTION: SEQ ID NO: 49:  
US-10-620-642-49

Query Match 97.5%; Score 1231; DB 5; Length 273;  
Best Local Similarity 89.4%; Pred. No. 6.7e-111;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

Qy 1 MKKTQTWILTCIYLQLLFNPVLVTEGICRRNRVTNNVKDVTKLIVANLPKDYMITLKYYVPG 60  
Db 1 MKKTQTWILTCIYLQLLFNPVLVTEGICRRNRVTNNVKDVTKLIVANLPKDYMITLKYYVPG 60  
Qy 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISSEGLSNYSIIDKLVINIIVDDLVECVKENS 120  
Db 61 MDVLPSCWISSEMVVQLSDSLTDLKDFSNISSEGLSNYSIIDKLVINIIVDDLVECVKENS 120  
Qy 121 KDLKSKFKSPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSSLTSPKDSRVSVT 180  
Db 121 KDLKSKFKSPRLFTPEEPFRINRSIDAFKDFVASETSDCVVSSLTSPKDSRVSVT 180  
Qy 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 212  
Db 181 KPFMLPPVVAASSLRNDSSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKCR 240  
Qy 213 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 245  
Db 241 QPSLTRAVENTIQINEEDNEISMLOEKEREFOEV 273

## RESULT 13

US-10-620-642-61  
; Sequence 61, Application US/10620642  
; Publication No. US20050080250A1  
; GENERAL INFORMATION:  
; APPLICANT: Zeebo, Kristina M.  
; Bosselman, Robert A.  
; Suggs, Sidney V.  
; Martin, Francis H.  
; TITLE OF INVENTION: Stem Cell Factor  
; NUMBER OF SEQUENCES: 104  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
; STREET: 6300 Sears Tower, 233 South Wacker Drive  
; City: Chicago  
; STATE: Illinois  
; COUNTRY: United States of America  
; ZIP: 60606-6402  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: Patent In Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/10/620,642  
; FILING DATE: 16-Jul-2003  
; CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
; APPLICATION NUMBER: US/10/175,608  
; FILING DATE: 16-Oct-2002  
; APPLICATION NUMBER: 09/635,249  
; FILING DATE: 07-Aug-2000  
; APPLICATION NUMBER: 09/486,546  
; FILING DATE: 24-May-1995  
; APPLICATION NUMBER: 08/172,329  
; FILING DATE: 21-Dec-1993  
; APPLICATION NUMBER: 07/982,255  
; FILING DATE: 25-Nov-1992  
; APPLICATION NUMBER: 07/684,535  
; FILING DATE: 10-Apr-1991  
; APPLICATION NUMBER: 09/589,701  
; FILING DATE: 10-Oct-1991  
; APPLICATION NUMBER: 07/573,616  
; FILING DATE: 24-Aug-1990

APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35199  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <unknown>  
INFORMATION FOR SEQ ID NO: 61:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-10-620-642-61

Query Match 97.5%; Score 1231; DB 5; Length 273;  
Best Local Similarity 89.4%; Pred. No. 6.7e-111;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTQTWLTCTIYQLQLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
Db 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
QY 121 KDKKSFSPKSPRLTPEEPFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKG----- 174  
Db 121 KDKKSFSPKSPRLTPEEPFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPPGDSSSLHWAAMALPALFSLIIGFAFGALYWK 212  
Db 181 KPFMLPVAASSLRNDSSSNRKAKNPPGDSSSLHWAAMALPALFSLIIGFAFGALYWK 240  
QY 213 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 245  
Db 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273

RESULT 14  
US-09-005-243-48  
Sequence 48, Application US/09005243  
Patent No. US20020018763A1  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/005,243  
FILING DATE:  
CLASSIFICATION:

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/449,653  
FILING DATE: 24-MAY-1995  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/34465  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-005-243-48

Query Match 97.1%; Score 1226; DB 3; Length 273;  
Best Local Similarity 89.0%; Pred. No. 2e-110;  
Matches 243; Conservative 0; Mismatches 2; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
Db 1 MKKTQTWLTCTIYQLQLFNPLVKTEGICRNRVTNNVDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
Db 61 MDVLPSCWISVMVQVSDSLTDLDFKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
QY 121 KDKKSFSPKSPRLTPEEPFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKG----- 174  
Db 121 KDKKSFSPKSPRLTPEEPFRIFNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPPGDSSSLHWAAMALPALFSLIIGFAFGALYWK 212  
Db 181 KPFMLPVAASSLRNDSSSNRKAKNPPGDSSSLHWAAMALPALFSLIIGFAFGALYWK 240  
QY 213 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 245  
Db 241 QPSLTRAVENTIQUINEDNEISMLOKEREFOEV 273

RESULT 15  
US-09-224-683-48  
Sequence 48, Application US/09224683  
Patent No. US20020031491A1  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Kristina M.  
APPLICANT: Bosselman, Robert A.  
APPLICANT: Suggs, Sidney V.  
APPLICANT: Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/224,683  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/35136  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: 25-3856  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-224-683-48

Query Match 97.1%; Score 1226; DB 3; Length 273;  
Best Local Similarity 89.0%; Pred No. 2e-110;  
Matches 243; Conservative 0; Mismatches 2; Indels 28; Gaps 1;  
  
Qy 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60  
Db 1 MKKTQTWLTCTIYLQLLFNPLVKTGICRNRVTNNVNDVTKLVANLPKDYMITLKYYPG 60  
  
Qy 61 MDVLP SHCWI SEMV VQLSDSLTDLDFKPSNISEGLSNYSIIDKLVNI VDDLV ECVKENS 120  
Db 61 MDVLP SHCWI SEMV VQLSDSLTDLDFKPSNISEGLSNYSIIDKLVNI VDDLV ECVKENS 120  
  
Qy 121 KDLKSFKSPRLFTPEEFRIENRSIDAPKDFV VASETSDCVVSSSTLSPEKG----- 174  
Db 121 KDLKSFKSPRLFTPEEFRIENRSIDAPKDFV VASETSDCVVSSSTLSPEKSRVST 180  
  
Qy 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIIGFAFGALYWK 212  
Db 181 KPFLMPPVAASSLRNDSSSNRKAKNPPGDSLSLHWPAMALPALFSLIIIGFAFGALYWK 240

Qy 213 QPSLTRA VNIQI NEEDNEI SMLQKRR EFOEV 245  
Db 241 QPSLTRA VNIQI NEEDNEI SMLQKRR EFOEV 273

Search completed: February 22, 2006, 18:36:56  
Job time : 98.865 secs

GenCore version 5.1.7  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: February 22, 2006, 18:22:17 ; Search time 9.44904 Seconds  
(without alignments)  
386.005 Million cell updates/sec

Title: US-10-620-642-63

Perfect score: 1262

Sequence: 1 MKKQTWLTCTIYLQLLFN.....NEEDNEISMLQKREPOEV 245

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 117670 seqs, 14887254 residues

Total number of hits satisfying chosen parameters: 117670

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA\_New.\*

1: /cgn2\_6/ptodata/2/pubpaa/US08\_NEW\_PUB.pep.\*  
2: /cgn2\_6/ptodata/2/pubpaa/US06\_NEW\_PUB.pep.\*  
3: /cgn2\_6/ptodata/2/pubpaa/US07\_NEW\_PUB.pep.\*  
4: /cgn2\_6/ptodata/2/pubpaa/PCT\_NEW\_PUB.pep.\*  
5: /cgn2\_6/ptodata/2/pubpaa/US05\_NEW\_PUB.pep.\*  
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7: /cgn2\_6/ptodata/2/pubpaa/US11\_NEW\_PUB.pep.\*  
8: /cgn2\_6/ptodata/2/pubpaa/US60\_NEW\_PUB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1262	100.0	245	6	US-10-353-783-63
2	1231	97.5	273	6	US-10-353-783-49
3	1231	97.5	273	6	US-10-353-783-61
4	1226	97.1	273	6	US-10-353-783-48
5	1215	96.3	273	6	US-10-353-783-50
6	1099	87.1	248	6	US-10-519-390-24
7	1099	87.1	248	7	US-11-176-830-206
8	1097	86.9	248	7	US-11-176-830-520
9	1097	86.9	248	7	US-11-176-830-519
10	1096	86.8	248	7	US-11-176-830-537
11	1096	86.8	248	7	US-11-176-830-529
12	1096	86.8	248	7	US-11-176-830-536
13	1096	86.8	248	7	US-11-176-830-538
14	1095	86.8	248	7	US-11-176-830-499
15	1095	86.8	248	7	US-11-176-830-500
16	1095	86.8	248	7	US-11-176-830-501
17	1095	86.8	248	7	US-11-176-830-513
18	1095	86.8	248	7	US-11-176-830-517
19	1095	86.8	248	7	US-11-176-830-521
20	1095	86.8	248	7	US-11-176-830-523
21	1095	86.8	248	7	US-11-176-830-527
22	1095	86.8	248	7	US-11-176-830-535
23	1094	86.7	248	7	US-11-176-830-502
24	1094	86.7	248	7	US-11-176-830-506
25	1094	86.7	248	7	US-11-176-830-508

## ALIGNMENTS

### RESULT 1

US-10-353-783-63

; Sequence 63, Application US/10353783

; Publication No. US20050261175A1

; GENERAL INFORMATION:

; APPLICANT: Zeebo, Kristina M.

; Bosseiman, Robert A.

; Suggs, Sidney V.

; Martin, Francis H.

; TITLE OF INVENTION: Stem Cell Factor

; NUMBER OF SEQUENCES: 104

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

; STREET: 6300 Sears Tower, 233 South Wacker Drive

; CITY: Chicago

; STATE: Illinois

; COUNTRY: United States of America

; ZIP: 60606-6402

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/10/353,783

; FILING DATE: 28-Jan-2003

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/448,729

; FILING DATE: 24-MAY-1995

; APPLICATION NUMBER: 08/172,329

; FILING DATE: 21-DEC-1993

; APPLICATION NUMBER: 07/982,255

; FILING DATE: 25-NOV-1992

; APPLICATION NUMBER: 07/684,535

; FILING DATE: 10-APR-1991

; APPLICATION NUMBER: 07/589,701

; FILING DATE: 01-OCT-1990

; APPLICATION NUMBER: 07/573,616

; FILING DATE: 24-AUG-1990

; APPLICATION NUMBER: 07/537,198

; FILING DATE: 11-JUN-1990

; APPLICATION NUMBER: 07/422,383

; FILING DATE: 16-OCT-1989

; ATTORNEY/AGENT INFORMATION:

; NAME: Clough, David W.

; REGISTRATION NUMBER: 36,107

; REFERENCE/DOCKET NUMBER: 01017/32958A

Sequence 510, App  
Sequence 512, App  
Sequence 514, App  
Sequence 518, App  
Sequence 522, App  
Sequence 524, App  
Sequence 528, App  
Sequence 530, App  
Sequence 531, App  
Sequence 534, App  
Sequence 539, App  
Sequence 540, App  
Sequence 542, App  
Sequence 505, App  
Sequence 507, App  
Sequence 509, App  
Sequence 511, App  
Sequence 515, App  
Sequence 525, App  
Sequence 541, App

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/
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 312/474-6300
/ TELEFAX: 312/474-0448
/ TELEX: <Unknown>
/ INFORMATION FOR SEQ ID NO: 63:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 245 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ SEQUENCE DESCRIPTION: SEQ ID NO: 63:
US-10-353-783-63

Query Match 100.0%; Score 1262; DB 6; Length 245;
Best Local Similarity 100.0%; Pred. No. 1.7e-108;
Matches 245; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MKKTQTWLTCTIYQLQLLFPNPKTEGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYQLQLLFPNPKTEGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120
DB 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120
QY 121 KDLKSKFSKPEPLFTPEEFRIFNRSIDAPKDFVVASETSDCVVSSSTLSPEKGAKNPP 180
DB 121 KDLKSKFSKPEPLFTPEEFRIFNRSIDAPKDFVVASETSDCVVSSSTLSPEKGAKNPP 180
QY 181 GDSLSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLQEKER 240
DB 181 GDSLSLHWAAMALPALFSLIIGFAGALYWKRPQSLTRAVENTIQTNEEDNEISMLQEKER 240
QY 241 BFQEV 245
DB 241 BFQEV 245

RESULT 2
US-10-353-783-49
/ Sequence 49, Application US/10353783
/ Publication No. US20050261175A1
/ GENERAL INFORMATION:
/ APPLICANT: Zeebo, Kristina M.
/ Bosseiman, Robert A.
/ Suggs, Sidney V.
/ Martin, Francis H.
/ TITLE OF INVENTION: Stem Cell Factor
/ NUMBER OF SEQUENCES: 104
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
/ STREET: 6300 Sears Tower, 233 South Wacker Drive
/ CITY: Chicago
/ STATE: Illinois
/ COUNTRY: United States of America
/ ZIP: 60606-6402
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: Patent In Release #1.0, Version #1.30
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/10/353,783
/ FILING DATE: 28-Jan-2003
/ CLASSIFICATION: <Unknown>
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: 08/448,729
/ FILING DATE: 24-MAY-1995
/ APPLICATION NUMBER: 08/172,329
/ FILING DATE: 21-DEC-1993
/ APPLICATION NUMBER: 07/982,255
/ FILING DATE: 25-NOV-1992
/ APPLICATION NUMBER: 07/684,535

/
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 312/474-6300
/ TELEFAX: 312/474-0448
/ TELEX: <Unknown>
/ INFORMATION FOR SEQ ID NO: 61:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 273 amino acids
/ TYPE: amino acid
/ STRANDEDNESS: single
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ SEQUENCE DESCRIPTION: SEQ ID NO: 49:
US-10-353-783-49

Query Match 97.5%; Score 1231; DB 6; Length 273;
Best Local Similarity 89.4%; Pred. No. 1.3e-105;
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;

QY 1 MKKTQTWLTCTIYQLQLLFPNPKTEGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
DB 1 MKKTQTWLTCTIYQLQLLFPNPKTEGICRNRVTNNVNDVTKLVANLPKDYMITLKYPVG 60
QY 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120
DB 61 MDVLPSCWISWVQVLSLTDLLDKFSNISGLSNYSIIDKLVNIYVDDLVECVKENS 120
QY 121 KDLKSKFSKPEPLFTPEEFRIFNRSIDAPKDFVVASETSDCVVSSSTLSPEKG----- 174
DB 121 KDLKSKFSKPEPLFTPEEFRIFNRSIDAPKDFVVASETSDCVVSSSTLSPEKDSRVSVT 180
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAGALYWKRR 212
DB 181 KPFMLPPVAASSLNDSSSNRKAQNPFGDSLSLHWAAMALPALFSLIIGFAGALYWKRR 240
QY 213 QPSLTRAVENTIQTNEEDNEISMLQEKERFQEV 245
DB 241 QPSLTRAVENTIQTNEEDNEISMLQEKERFQEV 273

RESULT 3
US-10-353-783-61
/ Sequence 61, Application US/10353783
/ Publication No. US20050261175A1
/ GENERAL INFORMATION:
/ APPLICANT: Zeebo, Kristina M.
/ Bosseiman, Robert A.
/ Suggs, Sidney V.
/ Martin, Francis H.
/ TITLE OF INVENTION: Stem Cell Factor
/ NUMBER OF SEQUENCES: 104
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
/ STREET: 6300 Sears Tower, 233 South Wacker Drive
/ CITY: Chicago
/ STATE: Illinois
/ COUNTRY: United States of America
/ ZIP: 60606-6402
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
```

OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 61:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 61:  
US-10-353-783-61

Query Match 97.5%; Score 1231; DB 6; Length 273;  
Best Local Similarity 89.4%; Pred. No. 1.3e-105;  
Matches 244; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
QY 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWMVYVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
DB 61 MDVLPSCWISWMVYVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
QY 121 KOLKSPKSPPEPLTPTPEFPFRNRSIDAFKDFVVASSETSCVVSSTLSPEKG----- 174  
DB 121 KOLKSPKSPPEPLTPTPEFPFRNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 212  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240  
QY 213 QPSLTRAVENTIQINEDNEISMQLQKEREFOV 245  
DB 241 QPSLTRAVENTIQINEDNEISMQLQKEREFOV 273

## RESULT 4

US-10-353-783-48  
Sequence 48, Application US/10353783  
Publication No. US20050261175A1  
GENERAL INFORMATION:  
APPLICANT: Zeebo, Krisztina M.  
Bosselman, Robert A.  
Suggs, Sidney V.

Martin, Francis H.  
TITLE OF INVENTION: Stem Cell Factor  
NUMBER OF SEQUENCES: 104  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun  
STREET: 6300 Sears Tower, 233 South Wacker Drive  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States of America  
ZIP: 60606-6402  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/353,783  
FILING DATE: 28-Jan-2003  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/448,729  
FILING DATE: 24-MAY-1995  
APPLICATION NUMBER: 08/172,329  
FILING DATE: 21-DEC-1993  
APPLICATION NUMBER: 07/982,255  
FILING DATE: 25-NOV-1992  
APPLICATION NUMBER: 07/684,535  
FILING DATE: 10-APR-1991  
APPLICATION NUMBER: 07/589,701  
FILING DATE: 01-OCT-1990  
APPLICATION NUMBER: 07/573,616  
FILING DATE: 24-AUG-1990  
APPLICATION NUMBER: 07/537,198  
FILING DATE: 11-JUN-1990  
APPLICATION NUMBER: 07/422,383  
FILING DATE: 16-OCT-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Clough, David W.  
REGISTRATION NUMBER: 36,107  
REFERENCE/DOCKET NUMBER: 01017/32958A  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 312/474-6300  
TELEFAX: 312/474-0448  
TELEX: <Unknown>  
INFORMATION FOR SEQ ID NO: 48:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 273 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 48:  
US-10-353-783-48  
Query Match 97.1%; Score 1226; DB 6; Length 273;  
Best Local Similarity 89.0%; Pred. No. 3.8e-105;  
Matches 243; Conservative 0; Mismatches 2; Indels 28; Gaps 1;  
QY 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
DB 1 MKKTQTWLTCTIYQLLLFNPVKTEGICRNRTNNVNDVTKLVANLPKDYMITLKYVPG 60  
QY 61 MDVLPSCWISWMVYVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
DB 61 MDVLPSCWISWMVYVQLSDSLTDLKFSNISEGLSNYSIIDKLVNIVDDLVCEVKENS 120  
QY 121 KOLKSPKSPPEPLTPTPEFPFRNRSIDAFKDFVVASSETSCVVSSTLSPEKG----- 174  
DB 121 KOLKSPKSPPEPLTPTPEFPFRNRSIDAFKDFVVASSETSCVVSSTLSPEKDSRVSVT 180  
QY 175 -----KAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 212  
DB 181 KPFMLPPVAASLRNDSSSNRKAKNPPGDSLSLHWAAMALPALFSLIIGFAFGALYWKCR 240





RESULT 7  
 US-11-176-830-206  
 ; Sequence 206, Application US/11176830  
 ; Publication No. US20060020116A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gantier, Rene  
 ; APPLICANT: Guyon, Thierry  
 ; APPLICANT: Drittanti, Lila  
 ; APPLICANT: Vega, Manuel  
 ; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
 ; FILE REFERENCE: 17109-012002 (922B)  
 ; CURRENT APPLICATION NUMBER: US/11/176,830  
 ; CURRENT FILING DATE: 2005-07-06  
 ; PRIOR APPLICATION NUMBER: 10/658,834  
 ; PRIOR FILING DATE: 2003-09-08  
 ; PRIOR APPLICATION NUMBER: 60/457,135  
 ; PRIOR FILING DATE: 2003-03-21  
 ; PRIOR APPLICATION NUMBER: 60/409,898  
 ; PRIOR FILING DATE: 2002-09-09  
 ; NUMBER OF SEQ ID NOS: 1306  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 206  
 ; LENGTH: 248  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 ; PUBLICATION INFORMATION:  
 ; DATABASE ACCESSION NUMBER: Genbank AAA85450  
 ; DATABASE ENTRY DATE: 1996-01-19  
 US-11-176-830-206

Query Match 87.1%; Score 1099; DB 7; Length 248;  
 Best Local Similarity 88.3%; Pred. No. 1.5e-93;  
 Matches 219; Conservative 0; Mismatches 1; Indels 28; Gaps 1;  
 QY 26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 85  
 DB 1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 60  
 QY 86 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 145  
 DB 61 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 120  
 QY 146 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 177  
 DB 121 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
 QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 237  
 DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 240  
 QY 238 KEREFOEV 245  
 DB 241 KEREFOEV 248

RESULT 8  
 US-11-176-830-520  
 ; Sequence 520, Application US/11176830  
 ; Publication No. US20060020116A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gantier, Rene  
 ; APPLICANT: Guyon, Thierry  
 ; APPLICANT: Drittanti, Lila  
 ; APPLICANT: Vega, Manuel  
 ; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
 ; FILE REFERENCE: 17109-012002 (922B)  
 ; CURRENT APPLICATION NUMBER: US/11/176,830  
 ; CURRENT FILING DATE: 2005-07-06  
 ; PRIOR APPLICATION NUMBER: 10/658,834  
 ; PRIOR FILING DATE: 2003-09-08  
 ; PRIOR APPLICATION NUMBER: 60/457,135

; PRIOR FILING DATE: 2003-03-21  
 ; PRIOR APPLICATION NUMBER: 60/409,898  
 ; PRIOR FILING DATE: 2002-09-09  
 ; NUMBER OF SEQ ID NOS: 1306  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 520  
 ; LENGTH: 248  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-176-830-520  
 Query Match 86.9%; Score 1097; DB 7; Length 248;  
 Best Local Similarity 87.9%; Pred. No. 2.2e-93;  
 Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;  
 QY 26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 85  
 DB 1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 60  
 QY 86 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 145  
 DB 61 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 120  
 QY 146 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 177  
 DB 121 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
 QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 237  
 DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 240  
 QY 238 KEREFOEV 245  
 DB 241 KEREFOEV 248

RESULT 9  
 US-11-176-830-537  
 ; Sequence 537, Application US/11176830  
 ; Publication No. US20060020116A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gantier, Rene  
 ; APPLICANT: Guyon, Thierry  
 ; APPLICANT: Drittanti, Lila  
 ; APPLICANT: Vega, Manuel  
 ; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu  
 ; FILE REFERENCE: 17109-012002 (922B)  
 ; CURRENT APPLICATION NUMBER: US/11/176,830  
 ; CURRENT FILING DATE: 2005-07-06  
 ; PRIOR APPLICATION NUMBER: 10/658,834  
 ; PRIOR FILING DATE: 2003-09-08  
 ; PRIOR APPLICATION NUMBER: 60/457,135  
 ; PRIOR FILING DATE: 2003-03-21  
 ; PRIOR APPLICATION NUMBER: 60/409,898  
 ; PRIOR FILING DATE: 2002-09-09  
 ; NUMBER OF SEQ ID NOS: 1306  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 537  
 ; LENGTH: 248  
 ; TYPE: PRT  
 ; ORGANISM: Homo sapiens  
 US-11-176-830-537  
 Query Match 86.9%; Score 1097; DB 7; Length 248;  
 Best Local Similarity 87.9%; Pred. No. 2.2e-93;  
 Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;  
 QY 26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 85  
 DB 1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 60  
 QY 86 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 145  
 DB 61 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 120  
 QY 146 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 177  
 DB 121 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
 QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 237  
 DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 240  
 QY 238 KEREFOEV 245  
 DB 241 KEREFOEV 248

US-11-176-830-537  
 Query Match 86.9%; Score 1097; DB 7; Length 248;  
 Best Local Similarity 87.9%; Pred. No. 2.2e-93;  
 Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;  
 QY 26 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 85  
 DB 1 EGICRNRVTNNVKDVTKLVLNPKDYMITLKYPGMDVLPSCWCWISMVVQLSDSLTDL 60  
 QY 86 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 145  
 DB 61 DKFSNISSEGLSNYSIIDKLVINVDLVECVKENSCKDKKSPKSPPEPRFTPEEPFRIFN 120  
 QY 146 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 177  
 DB 121 RSIDAPKDFVVASETSDCVSSTLSPEKSDRSVVTKPFMLPPVAASSLRNDSSSSNRKAK 180  
 QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 237  
 DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKQRQPSLTRAVENTIQUINEEDNEISMLOE 240  
 QY 238 KEREFOEV 245  
 DB 241 KEREFOEV 248

```
Db 61 DKFSNISEGLSNYSIIDKLNVIVDDLVECVKENS SKDKKSPKSPERLFTPEEFRIFN 120
QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 180
QY 178 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKKQPSLTRAVERNQIINEEDNEISMLOE 237
Db 181 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKKQPSLTRAVERNQIINEEDNEISMLOE 240
QY 238 KEREFQEV 245
Db 241 KEREFQEV 248
```

```
RESULT 10
US-11-176-830-519
; Sequence 519, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: 2005-07-06
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 519
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-519
```

```
Query Match 86.8%; Score 1096; DB 7; Length 248;
Best Local Similarity 87.9%; Pred. No. 2.7e-93;
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;

QY 26 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYPGMDVLPSCWVISEMVLSDSLTDLL 85
Db 1 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYPGMDVLPSCWVISEMVLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVIVDDLVECVKENS SKDKKSPKSPERLFTPEEFRIFN 145
Db 61 DKFSNISEGLSNYSIIDKLNVIVDDLVECVKENS SKDKKSPKSPERLFTPEEFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 180

QY 178 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKKQPSLTRAVERNQIINEEDNEISMLOE 237
Db 181 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKKQPSLTRAVERNQIINEEDNEISMLOE 240

QY 238 KEREFQEV 245
Db 241 KEREFQEV 248
```

```
RESULT 11
US-11-176-830-529
; Sequence 529, Application US/11176830
; Publication No. US20060020116A1
```

```
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 529
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-529
```

```
Query Match 86.8%; Score 1096; DB 7; Length 248;
Best Local Similarity 87.9%; Pred. No. 2.7e-93;
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;

QY 26 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYPGMDVLPSCWVISEMVLSDSLTDLL 85
Db 1 EGICRNRVTNNVKDVTKLVANLPKDYMITLKYPGMDVLPSCWVISEMVLSDSLTDLL 60

QY 86 DKFSNISEGLSNYSIIDKLNVIVDDLVECVKENS SKDKKSPKSPERLFTPEEFRIFN 145
Db 61 DKFSNISEGLSNYSIIDKLNVIVDDLVECVKENS SKDKKSPKSPERLFTPEEFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSSNRKAK 180

QY 178 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKKQPSLTRAVERNQIINEEDNEISMLOE 237
Db 181 NPPGDSSLHWAAMALPALFSLIIGFAGALYWKKQPSLTRAVERNQIINEEDNEISMLOE 240

QY 238 KEREFQEV 245
Db 241 KEREFQEV 248
```

```
RESULT 12
US-11-176-830-536
; Sequence 536, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; CURRENT FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 536
; LENGTH: 248
```

```
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-536

Query Match      86.8%; Score 1096; DB 7; Length 248;
Best Local Similarity 87.9%; Pred. No. 2.7e-93;
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;

QY 26 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 85
DB 1 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 60

QY 86 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSNRKAK 180

QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 237
DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 240

QY 238 KEREFQEV 245
DB 241 KEREFQEV 248

RESULT 13
US-11-176-830-538
; Sequence 538, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 538
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-538

Query Match      86.8%; Score 1096; DB 7; Length 248;
Best Local Similarity 87.9%; Pred. No. 2.7e-93;
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;

QY 26 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 85
DB 1 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 60

QY 86 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSNRKAK 180

QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 237
DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 240

QY 238 KEREFQEV 245
DB 241 KEREFQEV 248

RESULT 14
US-11-176-830-499
; Sequence 499, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 499
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-499

Query Match      86.8%; Score 1095; DB 7; Length 248;
Best Local Similarity 87.9%; Pred. No. 3.4e-93;
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;

QY 26 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 85
DB 1 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 60

QY 86 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSNRKAK 180

QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 237
DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 240

QY 238 KEREFQEV 245
DB 241 KEREFQEV 248

RESULT 15
US-11-176-830-500
; Sequence 500, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
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QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 237
DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 240

QY 238 KEREFQEV 245
DB 241 KEREFQEV 248

RESULT 14
US-11-176-830-499
; Sequence 499, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
; FILE REFERENCE: 17109-012002 (922B)
; CURRENT APPLICATION NUMBER: US/11/176,830
; PRIOR FILING DATE: 2005-07-06
; PRIOR APPLICATION NUMBER: 10/658,834
; PRIOR FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 499
; LENGTH: 248
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-176-830-499

Query Match      86.8%; Score 1095; DB 7; Length 248;
Best Local Similarity 87.9%; Pred. No. 3.4e-93;
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;

QY 26 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 85
DB 1 EGICRNRVTNNKDVTKLVANLPKDYMITLKYPGMDVLPSCWCISEMNVQLSDSLTDL 60

QY 86 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 145
DB 61 DKFSNISEGLSNYSIIDKLVNIVDDLVECVKENSCKDKKSPKSPPEPRLPFTPEEPFRIFN 120

QY 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177
DB 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSRVSVTKPFMLPPVAASSLRNDSSSNRKAK 180

QY 178 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 237
DB 181 NPPGSSSLHWAAMALPALFSLIIGFAGALYWKKGQPSLTRAVENTIQTNEEDNEISMLOE 240

QY 238 KEREFQEV 245
DB 241 KEREFQEV 248

RESULT 15
US-11-176-830-500
; Sequence 500, Application US/11176830
; Publication No. US20060020116A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Drittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding N
```

; FILE REFERENCE: 17109-012002 (922B)  
; CURRENT APPLICATION NUMBER: US/11/176,830  
; CURRENT FILING DATE: 2005-07-06  
; PRIOR APPLICATION NUMBER: 10/658,834  
; PRIOR FILING DATE: 2003-09-08  
; PRIOR APPLICATION NUMBER: 60/457,135  
; PRIOR FILING DATE: 2003-03-21  
; PRIOR APPLICATION NUMBER: 60/409,898  
; PRIOR FILING DATE: 2002-09-09  
; NUMBER OF SEQ ID NOS: 1306  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 500  
; LENGTH: 248  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-176-830-500

Query Match 86.8%; Score 1095; DB 7; Length 248;  
Best Local Similarity 87.9%; Pred. No. 3.4e-93;  
Matches 218; Conservative 1; Mismatches 1; Indels 28; Gaps 1;  
  
Qy 26 EGICRNRVTNNKQVTKLVANLPKDYMITLKYPGMDVLPSCWISEMNVQLSDSLTDLL 85  
Db 1 EGICRNRVTNNKQVTKLVANLPKDYIITLKYPGMDVLPSCWISEMNVQLSDSLTDLL 60  
  
Qy 86 DKFSNISEGLSNYSIIDKLNVIVDDLVKVCVKNSSKDKKSKSPKPELFTPESEFFRIFN 145  
Db 61 DKFSNISEGLSNYSIIDKLNVIVDDLVKVCVKNSSKDKKSKSPKPELFTPESEFFRIFN 120  
  
Qy 146 RSIDAFKDFVVASETSDCVSSTLSPEKG-----KAK 177  
Db 121 RSIDAFKDFVVASETSDCVSSTLSPEKDSVTKPFMLPPVAASSLRNDSSSNRKAK 180  
  
Qy 178 NPPGDSLSLHWAAMALPALFSLIIGFAGCALYWKKRQPSLTRAIVENIQINEEDNEISMLOE 237  
Db 181 NPPGDSLSLHWAAMALPALFSLIIGFAGCALYWKKRQPSLTRAIVENIQINEEDNEISMLOE 240  
  
Qy 238 KEREFQEV 245  
Db 241 KEREFQEV 248

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Job time : 10.449 secs